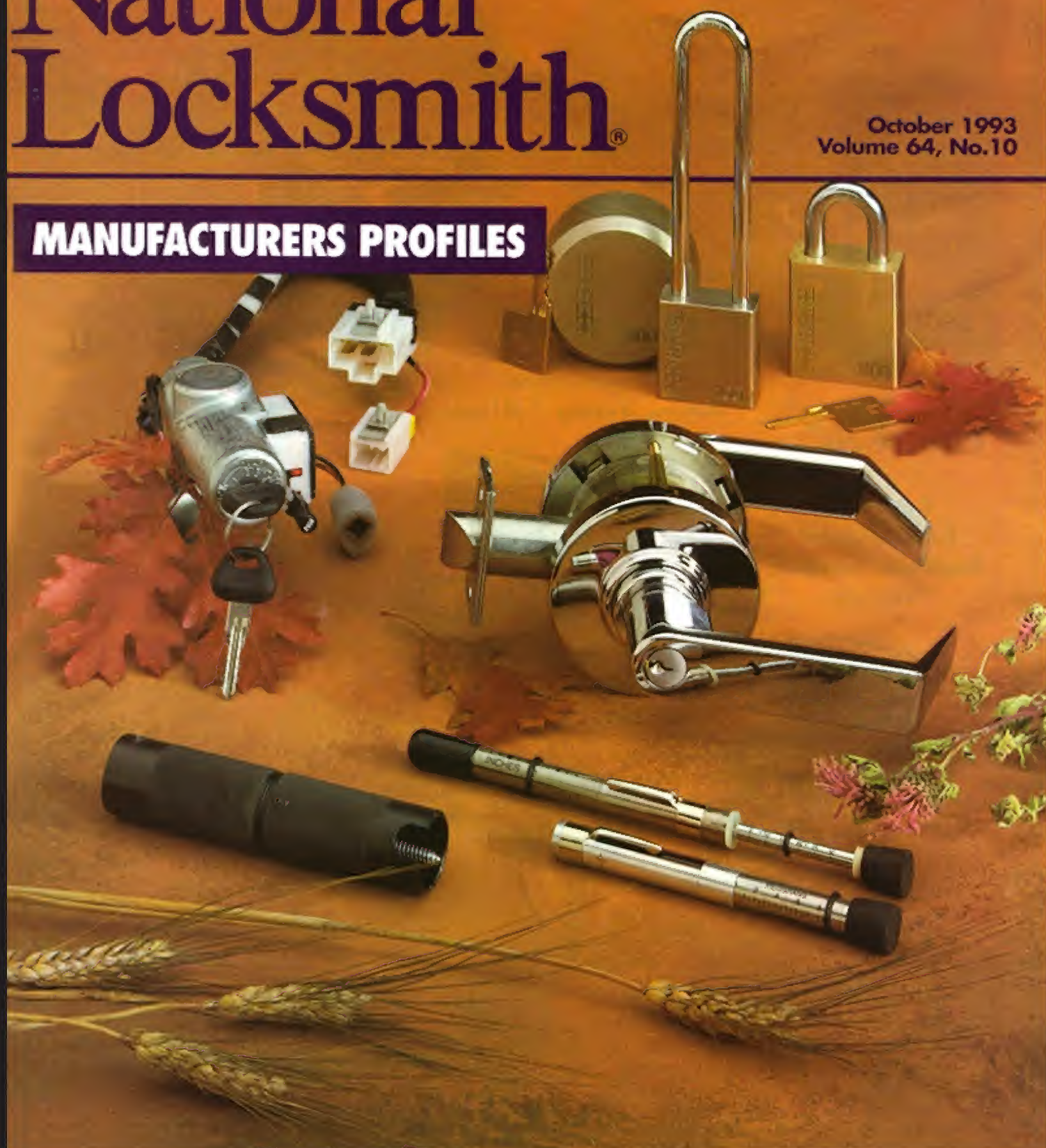


The National Locksmith®

October 1993
Volume 64, No.10

MANUFACTURERS PROFILES



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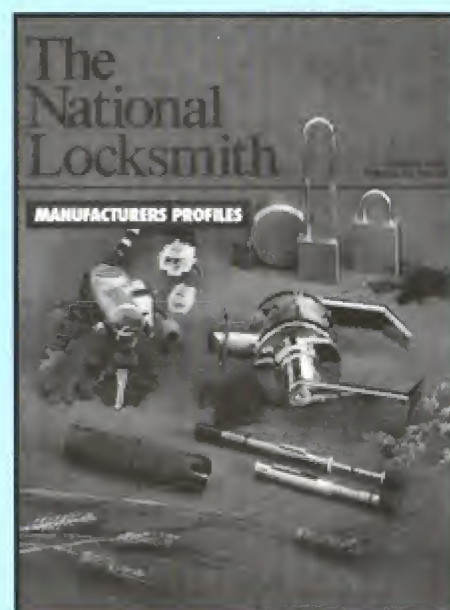
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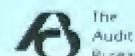
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COMMENTARY

Protecting Their Clients Businesses Protect Themselves

I would like to commend Jet Hardware for continuing an effort they began some time ago. Jet Hardware produces an interesting key catalog desired by thousands of locksmiths nationwide.

Although Jet does not charge the locksmith for their catalog, they ask that you accompany your request for a free copy of the catalog with a check for one dollar, or more, made payable to the American Cancer Society.

Jet will send you your free catalog, and they will forward your check to the American Cancer Society. So far, locksmiths have contributed thousands of dollars for cancer research because of the efforts Jet has made. In this day and age, it is refreshing that a company takes the time and trouble to help their fellow man as Jet is doing. Keep up the good work!

I read an interesting article in the September 1, 1993 edition of the *Wall Street Journal*. The article by Junda Woo, was entitled, "Businesses Find Suits on Security Hard to Defend."

To quote from the article, "It's getting tougher for businesses to defend themselves against lawsuits accusing them of shoddy security. The suits are typically filed by victims of violent crimes committed on business premises."

The writer goes on to explain that the average jury awards \$1.8 million for a rape committed at the location of a business. The number climbs to \$2.2 million for a death. Courts have decided that businesses do not necessarily have to guarantee the safety of their patrons. However, they do have to "take all economically feasible steps to provide a reasonable level of security."

In one case, a tenant of a management company located in Texas requested an extra door lock at her apartment as a precaution. The management informed her that her lease did not allow for a new



Marc Goldberg
Editor/Publisher

lock to be installed. (Actually, Texas law does provide that landlords must install a nightlatch, if requested by the tenant.)

In fact, later on, the woman was raped in her apartment. She won an award of \$16 million in state court, and this award was upheld upon appeal. Now, most locksmiths would argue that even a nightlatch does not offer enough protection against an intruder. But, the point remains that business owners may be held liable for inadequate security measures.

Statistics indicate that apartments and condos are most frequently sued under these circumstances...37.6% of these suits are filed against them. Hotels and motels are on the receiving end of 24.2%.

What can you do to help your commercial customers avoid this type of lawsuit? I suggest that you inform your clients about the extraordinary risks they face in under-securing their businesses. Spending a few thousand dollars on locks and lighting is a small price to pay compared with the awards juries are now handing out to the unfortunate victims. Even the cost of defending itself from such a lawsuit could torpedo the average business.

Then there are the victims to be considered. It is a tragedy that an individual should be subjected to a violent crime simply because insufficient security precautions were taken by a business owner.

Do your commercial customers a big favor and offer to perform a no-cost security survey of their premises. You can point out strengths and weakness in their systems. You may be saving the lives of their patrons. And you could be saving your client from the nightmarish prospect of a major lawsuit. Take particular pains to speak with your clients who are located in areas where crime has previously occurred.

Marc Goldberg

SEROOGY SPEAKS

Notes from the Managing Editor

Well, this marks the end of my first year with *The National Locksmith*, and what an interesting year it has been. Following are some reflections on the major issues that have faced our trade.



by
Tom Seroogy

The past has seen an ever widening gap between the locksmith and manufacturer; the manufacturer trying to realize higher profits by moving product through large chain stores and the locksmith feeling he's been short changed by the companies whose product he pushes.

As Managing Editor I've had the opportunity to speak to manufacturers from the position of being a locksmith, and I see a couple of interesting trends for both groups.

Many manufacturers now realize that selling through large chain stores is just part of doing business. More apparent to them is the need for service both during and after the sale to the customer. Since large chain stores cannot effectively support the service end of the products they carry, manufacturers are now starting to focus on the locksmith, providing us with the information and tools to properly service their equipment.

We as locksmiths, on the other hand, are beginning to position ourselves as security professionals. Our role for the future has expanded from key cutting and lock installation, to understanding all aspects of a customer's security needs.

Following on the heels of these trends is the need for education. At no other time in our history has technology advanced so quickly. The proliferating need for higher security has been touched by new methods, new materials, computers and electronics. Growth in security reaches into the auto industry, the safe industry, the residential, commercial, institutional, detentional and even governmental sectors of our responsibility as locksmiths/security professionals.

The future is demanding competent security personnel that specialize in one or two aspects of security. Education by manufacturers, associations and trade publications is more critical than ever.

Switching subjects, legislation is also an issue that is demanding attention from the locksmith, and the industry. As the public shouts for a greater degree of security, politicians and special interest groups are now looking at and passing laws that affect our ability to do business.

In general, we have been very slow to respond to such legislation, usually waiting until we "get caught" before raising our voice or giving a show of dissent. By nature, we like our independence, and, until now, have been able to enjoy it unhindered. The unfortunate path of the future, however, is that sooner or later we are going to be regulated. As locksmiths, we can either let someone else dictate these regulations and laws to us, or we can join (and strengthen) local associations that will have a voice in any pending legislation. The choice is up to us.

Finally, I have enjoyed this last year getting to know locksmiths from around the country and the world. You have been instrumental in the direction of *The National Locksmith*. You are the reason we exist. Your comments and suggestions have been taken to heart and incorporated into the magazine possible.

The Security Certificate Program is just one example of change resulting from your requests and needs. Articles have become more technical and service oriented as well, because of your input. We appreciate and look forward to making more changes that help you as a professional.

So, in the words of Bartles and James, "Thank you for your support!"



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LETTERS

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

Reader Argues In Favor Of Duplication

Dear Marc:

After reading your Commentary in March, 1993, regarding "Do Not Duplicate" (DND), I was reminded that this has been a controversial issue for the 29 years I've been in the locksmith business. In Texas there are no laws governing locksmiths. I am an honest person and I demand honesty and respect from my employees.

Best keys have "It is Unlawful to Duplicate This Key" stamped on them. Well, if it is unlawful for me, then it is unlawful for Best to cut the key. It says so on the key. I feel that if a person has a key to duplicate, it is my job as a locksmith to serve him. If a person owns a key that is stamped "Do Not Duplicate," then it is his responsibility to control his system. If I turn the customer away, he is going to get the key made elsewhere and won't ever come back to my shop. I have three locksmith competitors in my area plus discount stores and

hardware stores that will cut his key.

I left a 40 hour a week job making good money as a machinist after learning all I could to start my business. At that time I was the only locksmith in my area. Duplicating keys is part of what I do.

I would however, suggest if one is concerned, have some cards printed up requesting to duplicate keys stamped Do Not Duplicate, the name of the business, type of key, number of cuts, the person's drivers license, and signature of the person requesting the duplicate. Let the person know they are responsible. If the key bearer is trying to pull a fast one, then they most likely will not have the key cut. And you didn't refuse to cut the key. The cards could be kept on file in case of an investigation. For \$1.15, how much time should you spend!

Thank you. I enjoy *The National Locksmith*.

J.C. Lancaster
Texas

Request Made For Special Issue

Dear Marc:

I am a partner in a locksmith shop and I want to become a complete locksmith on wheels (mobile service).

If possible, I would like you to dedicate an entire issue to mobile

service, covering vans, shelves, power lines, converters, machines, etc.

I want you to search for the lightest and most durable materials and machines on the market. I really appreciate your help and cooperation.

Luis Oquendo
Puerto Rico

Locksmith Seeks Keyboard Design Info.

Dear Marc:

I would like to see some articles printed on locksmiths who have designed their own keyboards and the layout they have used in their shops, not vans.

Jimmie Storie
North Carolina

Offer The Best Advice To Senior Citizens

Dear Marc:

In the August 1993 issue, in the article entitled Opening a Fort Knox, Dave McOmie spent a good deal of time advising his customer on purchasing a good burglar resistant safe. I feel it would have been far better to advise the older folks to place their money in a good bank for their own safety and the security of their funds. A burglar with a gun would have no trouble forcing the homeowner to open their safe. It is our job as security experts to advise

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people as to the *best* protection for themselves and their goods. With many people trying to take advantage of our senior citizens they have every right to be paranoid and skeptical. Let's hope safe dealers try to give good advice to senior citizens even if it costs them a sale.

John McComber
Canada

Editor's Note:

Locksmiths are in the business of selling security. The article spoke of a Fort Knox safe, and they along with other manufacturers, have saved their customers from countless losses due to burglary. Sending some customers to the bank will not help those commercial or residential customers who demand the convenience of a good safe. Fort Knox make a fine product, as do others. Selling an appropriate safe to your client is doing him a favor. It is also doing your job as a security professional.

Technitips Problem Addressed

Dear Marc:

I became confused after reading a Technitip by John Franklin, concerning opening the trunk of an '86

T-Bird. I like the tip and feel it will be useful. But I can't swear to it because I don't keep records on what kind of cars I open. I'm almost sure I've picked the trunk lock on '86 'Birds.

Ed Hamm
Illinois

Editor's Note:

The Technitip you are referring to is on page 12 of the July 1993 issue of The National Locksmith. As a locksmith my work needs to be as professional as possible. As a business, I need to be as profitable as possible. Most of the time these two facets go hand-in-hand.

In the case of the 1986 Thunderbird, yes, the trunk can be picked. However, opening the trunk through the trunk release button is a much faster, more profitable solution.

The reason this method was not used first is because the customers are watching, and there is no reason the locksmith should expose opening secrets to the customer. In this case, the locksmith simply performed the picking ritual that every customer expects. Had it opened quickly then the other method would not have been necessary and the customers would not have been the wiser.

Reader Warns Of Problem With Quorum

Dear Marc:

On May 22, 1992 I purchased two starter Distributor kits (for electronic security systems) from Quorum International, Ltd. out of Scottsdale, AZ. I paid \$90.00 cash up front for the units which were ordered and to be delivered at a later date. However I never received them. Apparently the girl that sold me the units left the state without delivery.

There was supposed to be a training office here in Las Vegas. I tried to contact them but, the phone has been disconnected and no one is available to talk to. I have tried unsuccessfully to get my money back from Quorum International by calling their main office in Arizona. After several attempts, it appears that they are not concerned with the fact that their customers are getting ripped off. To make matters more complicated since Quorum is out of state it makes it more difficult for me to pursue. It's bad enough when you get ripped off by a customer, now you have to watch your suppliers too!

I didn't feel like I was dealing with

Continued on page 91



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TECHNITIPS

Helpful hints from fellow locksmiths

Send in your tips
and win.

HOW TO ENTER

All you need to do
is submit a tip,
covering any aspect
of locksmithing to

**The National
Locksmith.**

Certainly, you have
a favorite way of doing things that
you'd like to share with other
locksmiths. Why not write it down and
submit it to: *Robert Sieveking*,
*Technitips' Editor, The National
Locksmith*, 1533 Burgundy Parkway,
Streamwood, IL 60107.

Tips submitted to other industry
publications will not be eligible! So get
busy and send in your tips today. You
may win cash merchandise, or even
one of many key machines or code
book sets. At the end of the year, we
choose the winners of the listed prizes.
Last year dozens of people walked off
with money and prizes. Wouldn't you
like to be one of the prize winners for
1993? Enter today! It's a lot easier
than you think.

EVERY TIP WINS "LOCKSMITH BUCKS!"

Yes, every tip published wins a prize.
But remember, you must submit your
tip to **The National Locksmith**
exclusively. Each and every tip
published in Technitips wins you \$25
in Locksmith Bucks! Use this
spendable cash toward the purchase
of any books or merchandise from
The National Locksmith. You will
also receive a Bonded Locksmith
bumper sticker and decal. Plus you
will be eligible for really big prizes.

BEST TIP OF THE MONTH

If your tip is chosen as the best tip of
the month, you will win \$50 in cash as
well as \$35 in Locksmith Bucks! Plus
you will receive a Bonded Locksmith
bumper sticker, decal and a
Locksmith cap. And, you may win one
of the annual prizes.



by
Robert Sieveking

These Prizes Awarded Each Month!

- All-Lock A 7000 VATS Decoder
- HPC Pistolpick
- Silca Rubberhead Keyblanks (100 Blanks)
- ESP PR-13 Professional Lock Pick Set
- Sieveking Products EZ-Pull GM Wheel Puller
- Fort Lock Backer Board Display Panel

Submit your tip and win!

October's Best Tip

This Technitip concerns a
method that I have found very
successful, in recombining Papaiz
profile cylinders. I have struggled

almost as hard
with writing a
good Technitip
as I have with
finding a method
of servicing the
Papaiz cylinders.
This tip is much
easier than using
segmented, or
magnetic
following tools.
To simplify
servicing the
Papaiz profile
cylinder, you will
first need to
fabricate a
special plug
follower, like the
one shown in
illustration one.
This follower
was made from a
piece of .375"
(3/8") brass rod.
A 10mm bolt is

slightly larger, at .3937", but will
work equally well. Notch one end of
the follower, as you see in the
illustration, to accept the cam lug on
the rear of the lock plug. Use a

"thin" hack saw blade to cut a
groove along the length of the
follower, as you see in the
illustration. The groove must be cut
along the middle of the cam lug cut-

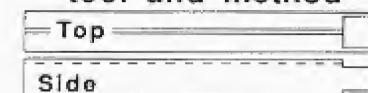
out, as in the
illustration. A
second tool, not
shown is made
from a "give-away
key ring." Straighten a 1-
1/2" section of
the key ring,
leaving the loop.
The groove in the
follower should
be wide and deep
enough to easily
accept the
straightened
portion of the
ring.

To recombinate the cylinder,
first remove both
plug retaining
clips. Use a key to
remove one plug,
dropping the top
pins and springs.

Set the top pins
and springs aside. Use the follower
to remove the second plug. Pick,
impression, or shim the cylinder to
remove the plugs. Push the follower
through the cylinder far enough to

Papaiz

Profile cylinder keying tool and method



(Follower is made from a 10mm bolt
or 3/8" Brass rod)

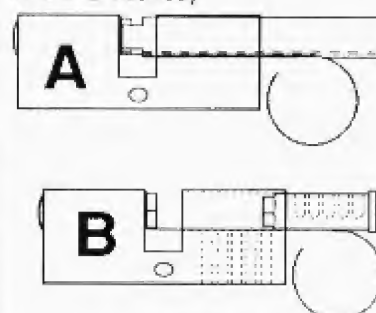


Illustration 1

reload the first cylinder, from the center outward. Reload the top pins and springs of the first plug that was removed. Re-load bottom pins into both plugs using the new change key. Install the second plug (the last one to be removed) and its retaining clip.

From here, the method of replacing the first plug removed very much resembles the method used with Almont padlocks. Insert the key ring rod into the groove of the follower, inside the cylinder, as you see in "A" of the illustration. Rotate the follower to bring the groove and wire over the top pins of the cylinder. Push the rod through the cylinder, to rest on top of the cam lug of the second plug. Slide the follower out of the cylinder, while holding the top pins captive with the wire. Align the bottom of the keyway with the key ring wire, as you see at "B," and push the plug into the cylinder. The plug will retain the top pins and springs as you assemble the cams into the assembly. Replace the second cam with the tip facing the top of the keyway. Insert the first cam with the tip facing the top of its keyway. The first plug is still 180 degrees out, as you see in the illustration at "B." Push the first plug fully into the cylinder, to mate with its cam. Remove the ring wire and rotate the plug 180 degrees, to the key pull position. Use a key to rotate the cylinder, and install the cylinder retaining clip. Check both cylinders for proper operation. This completes the rekeying sequence.

I recently purchased a Lab cabinet lock pinning kit for CCL and National cabinet locks. The "C" reference numbers, in red, for the National locks correspond with the Papaiz cuts. The C-3751 National tumbler fits a #1 Papaiz cut. The C-3752 National tumbler fits a #2 Papaiz cut, and so on. This should make pinning to the factory depths much easier, in a "key-alike" situation.

I find this to be the quickest and easiest method of servicing these cylinders, and hope you have equal success. Good luck.

Leo Koulogianes
Tennessee

All-Lock VATS Decoder Winner

My Technitip is for those locksmiths who occasionally need to remove and replace a trunk emblem or decorative lock cover, to allow the trunk lock to be removed for service or recombining. Some of the current lock trim is fastened to the deck lid by pop rivets. The attachment rivets are recessed, making them very difficult to replace with a common pop rivet tool.

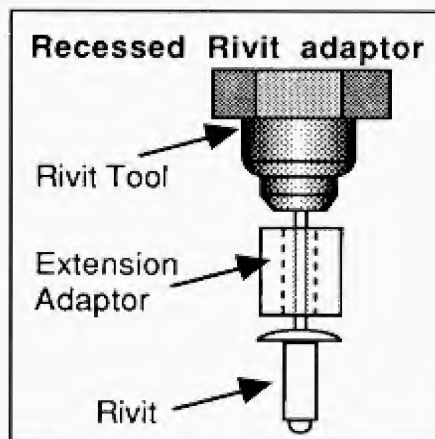


Illustration 2

I've found that the female post of an old Weiser deadbolt is just the right size to enter the recess and act as an extension adapter for the rivet tool. Cut a 1/4" piece from the female threaded attachment post of a scrap Weiser deadbolt. Slip it over the rivet, as you see in illustration two, before you put it into the rivet tool. The adapter will allow you to install the rivets in the recessed holes, securely and without damage to the trim.

Note: If the extension is cut too long, the rivet tool may not grip the rivet well enough to expand the rivet properly.

Brad Spurlock
Louisiana

HPC Pistolpick Winner

This Technitip is for an alternate source for round type key extractors. In some cases, the standard extractors are too large to work in a particular keyway. Go to a welding supply house, and ask for a set of burning torch tip cleaners. In some cases, they will include pin vise and a few tiny drills, that are used to open a hole in order to start one of the spiral "extractors." There are several sizes of extractors, the tiniest are ideal for really tight keyways.

Another tip, concerning the spiral type extractor, is explained in

"Stone" your spiral extractors for better results



Illustration 3

illustration three. Stone one side of the extractor "flat." Hold the extractor in your pin vise, and rub it on an oil stone, to remove the biting teeth, as you see in illustration 3-B, from one side of the extractor. When you turn the extractor into the keyway, between the key and the inside of the keyway, rotate the flat side toward the keyway and the toothed side against the broken key. The teeth will bite and pull the key, while the flat side will slip easily on the inside of the keyway, making extraction a lot easier.

K. E. Chambers
South Carolina

Silca Keyblanks Winner

My Technitip deals with a method I have used to open a 1983 Jaguar XJ6 auto. This is a common body style, so I am sure this Tip will work equally well over a number of other model years. When you find it necessary to open a Jaguar rear deck, to retrieve keys or service the lock cylinder, you will find this technique handy.

Remove the rear license plate and pry out the rubber plug in the lower right hand corner, under the plate.

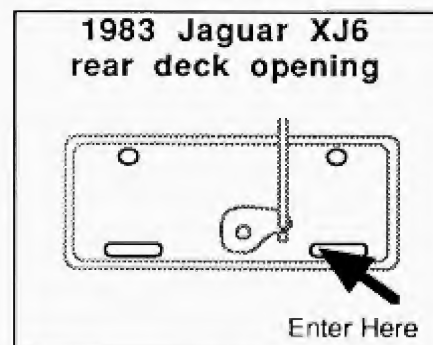


Illustration 4

Continued on page 14

Continued from page 12

Use a flex-light or flash to peer into the hole and locate the vertical lock linkage, as you see in illustration four. Use a long slender screw driver to lift the vertical linkage and release the deck lid catch. There is a lazy action pawl on the lock cylinder, that will allow the lock to be released without turning or damaging the cylinder. Install the rubber plug carefully, and replace the license plate, to complete the opening.

Reed J. Gower
Illinois

ESP Pickset Winner

This Technitip concerns a five step method for opening the LeFebure changeable combination double nose safe deposit box lock. This method works extremely well on the LeFebure lock, and the described method, or one with only slight modification, will find equal success on many similar locks.

1. Pull the nose, on the renter side of the lock. To make this a little easier, tap the renters nose (the nose of the lock) with a hammer and punch. This will fracture the nose at the base, and make pulling easier. The nose and

keyway will be removed, leaving the foot of the keyway at the rear of the lock case, under the lever stack.

2. Use a 3/16" straight blade screwdriver to rake the levers down, past the neutral position. With the renters keyway out of the lock, the tumblers will be free to fall below the fence or stump. Start at the front, and work to the rear of the lock, one or two levers at a time. You will hear a click as each lever is forced down, past the change post in the center of the lock. (See photograph 5.)



5. Starting at the front, work on one or two levers at a time. Hear a click as each lever is forced down.

3. With all levers in the down position, insert and turn the guard key, as you see in photograph six.



6. Inserting and turning the guard key.

4. With the guard key turned, insert the screwdriver under the tumblers. Push the screwdriver all the way to the rear of the lock case, to engage the "foot" of the renters keyway. The "foot" was left in the lock case, after the nose and keyway were pulled in step one. (See photograph 7.)

5. Hold the screw driver in place, at the rear of the lock case, as you lift the levers "together" to the neutral position. Apply a light turning tension



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7. The foot which was left in the lock case.

as you lift the levers. When all have been lifted to the correct height, the screw driver can be turned to retract the lock bolt, as you see in photograph eight.



8. The screwdriver has been turned to retract the bolt.

This method is possible because all the lock tumblers are identical in a changeable combination lever lock. To insure success, and more completely understand the principle behind this Technitip, study an unmounted lock before attempting an opening. It is important to note that these locks will be mounted in both a left and right hand position. The term "lift," used in the instruction, can mean pull down when the lock is mounted in the opposite hand. Open and prosper.

Mark Fleming
Florida

E-Z Pull GM Wheel Puller Winner

I'm so well organized, I scare myself sometimes. When I finish cutting a key by code, on my 1200CM code machine, I always put the little brass shim away, right where I keep

it. You know the one. It keeps some of those hard to clamp foreign keys from tipping out of the key vise while you are cutting them. I know I put it away, but I can't remember where I put it. I finally quit looking, and made a new one from a flat brass deposit box key. Put the key in the 1200CM key vise, and use the G.M. code card to plane off the top of the key to a #4 depth. You'll have a long flat shim, the correct width to work with all those hard to clamp keys, and it will have a nice head, to hang on the key board

above the code machine. The head on the shim also makes it easier to handle.

Ron Ryder
Nevada

Fort Lock Display Board Winner

Here's a Technitip for those times when you are called to recombine the locks in an aluminum store door, and find that one of the mounting

Continued on page 88



***Don't panic!
We have Security
Exit Devices.***

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NEWSMAKERS

New Products and Industry News

Smart Safe By McGunn

The new Smart Safe®, an innovative design that secures cash deposits in three color coded drop drawers, dispenses cash, restricts employee access, records and stores all transactions in its computer memory has been announced by McGunn Safe Company.

The Smart Safe® is a mechanical manager. It will secure cash and make change even when you step out of your store. It allows you the freedom to leave the store and not worry about phony transactions. Each transaction is recorded through an individual employee Personal Identification



Number (PIN). There is no mistaking who accessed the safe and no keys to lose or fall into the wrong hands.

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Reading's Roll Up Door Body

Reading Body Works' new Roll Up Door Body provides several advantages to many markets in the truck body industry.

This dual purpose vehicle allows for twice as much storage space. It provides outside storage compartments while still having equal room inside in comparison to the conventional van. Now you can carry all tools and inventory in your vehicle and save valuable time having everything at your fingertips.

The upward acting roll doors "roll up" out of your way allowing easy access to equipment without protruding doors. This is especially beneficial in metropolitan areas avoiding the hazards of opening doors in traffic or in other limited space areas.



For **FREE** Information
Circle 353 on Rapid Reply

Schlage PL-100 Padlock

Schlage Lock Company's PL-Series padlocks will enable facility managers and locksmiths to standardize their key systems with one key controlling all their building's security areas. It will also feature the first-time availability of a Schlage interchangeable core design. Primus high security cylinders are also available in the line of 11 different padlocks.



For **FREE** Information
Circle 354 on Rapid Reply



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Door Sentry By Aiphone

Aiphone Intercom Systems introduces The Door Sentry, a new, lower cost, multi-featured Video Entry Security Intercom System for home or business entries. With a wide angle lens capturing twice the area of other fixed camera systems, the Door Sentry is simple to install, easy to operate, and very competitively priced.



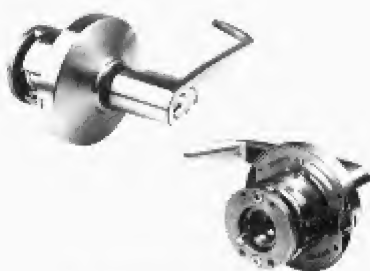
System features include: automatic backlight control, door release button for optional electric door strike, monitor button to check entry area undetected, two-stroke electronic door chime, and optional second room station.

The boxed Door Sentry set includes a door camera, audio/video room station, and power supply.

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Arrow Lever Trim For Rim Device

Arrow Lock has announced the availability of two lever designs-Sierra (SRR) and Broadway (BRR) for use with their 1200 Series Exit Device. The trim is non-handed, requires no additional mounting holes, has no exposed screws and is available in a variety of finishes and functions. The levers meet accessibility code requirements, therefore representing an excellent opportunity for retrofitting existing structures.



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ASSA Removable Core

ASSA's new patented, U.L. 437 rated removable core cylinders incorporate the same physical resistance and geographically protected key control found in all ASSA Twin/600 products. Available in both mortise and rim cylinders, as well as all standard architectural finishes. The coded, reversible sidebar makes rekeying a 30 second procedure, without ever touching the pin tumblers. With over 76,000 combinations, this removable core cylinder can handle virtually any master key system requirements.



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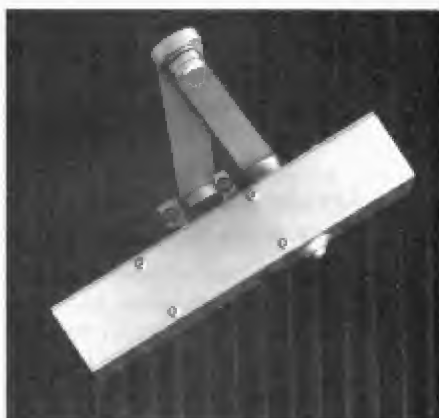
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Dorma HS 83 Surface Closers

New HS 83 Series surface closers from Dorma Door Controls Inc. provide vandal and tamper resistance for openings that must meet accessibility code requirements.

The high-security closers are designed for use in schools, corrections facilities, government installations and similar locations where the door hardware may be subjected to vandalism, tampering or other abuse.



For **FREE** Information
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AGS 900 By Automatic Gate

Automatic Gate Supply Company has just released its new AGS 900 Sliding Gate Operator.

This new operator can handle gates 25 feet in length and weighing up to 375 pounds.

The AGS 900 only needs 12 volts



and comes complete with its own transformer to run low voltage wiring to the operator location. Options include 115 Volt input if desired or use optional solar panel package for remote locations.

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Hudson's Key Changeable Core Locks

A full range of key changeable core locks for original equipment manufacturers are available from Hudson Lock, Inc.

Hudson Lock's Direct Ship Program eliminates the need for customers to inventory multiple key codes and coordinate with their own



Continued on page 20



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HUDSON'S

Continued from page 18

installers to key all locks alike within an office. Instead, all they have to do is simply tell Hudson Lock their requirements by part number and key code and they will receive them at their actual point-of-use location within 3 working days.

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Circle 359 on Rapid Reply

Kwikset's Titan Lever Line

Kwikset Corporation, America's largest manufacturer of residential locksets, announces the availability of titan solid brass levers.

Titan levers are now available in four consumer preferred styles that combine elegance and versatility and compliment a wide range of decorator styles. All are non-handed designs allowing for each installation on left or



right-hand doors. Titan levers offer ANSI Grad 2 exterior knobs and high security 6-pin cylinders.

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Stock Locks® Catalog By National Cabinet Lock

Stock Locks® is a collection of commonly used, original-equipment-manufacturer-type cabinet locks, key blanks and keying kits ready for immediate delivery. Stock Locks meet broad security needs for most door and



drawer components. All locks and like hardware are individually poly-bagged and cased for simplified stock-keeping.

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Von Duprin's Two-Point Fire Door Unit

A new Two-Point Lever-Operated Unit is now offered by Von Duprin for use on fire doors. Available on a special order basis, the new 237 two-point vertical latch combines the firm's 8847-F Vertical Rod and Latch Assembly with a Soffit Latch and Button Release, as well as a special 371L-BE lever trim control and mounting plate.



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Test Article #28

GENERAL SECURITY

To be tested in
December '93 issue
Details in front of issue

SARGENT 8888F EXIT DEVICE

*"This is part of our security Certificate Program.
In an upcoming issue, the content will be tested."*

This is the last in a series on installing various brands of rim exit devices. This article is covering an installation of the Sargent 8888F exit device on to a fraternity house emergency exit door at Northwestern University in Evanston, Illinois.



1. No exterior trim is present on this door, indicating an exit only function.

The door being worked on is a solid wood core door with wood frame. (See photograph 1.) While still very usable, there is no hiding the number of parties this door has seen. The older hardware being replaced is the Best emergency exit alarm device seen in photograph two.

As always, we begin with the instructions and the templates. These give all the information any installer needs to successfully install the unit. Included are the mounting height and backset specifications, mounting specifications for the various strikes that can be used, and hardware or trim application. As this device is being installed for an exit only

function, we are not concerned with outside trim.

Recalling the installation procedures for exit only rim devices, the head is fastened to the door first, followed by the push bar, and finishing with the installation and



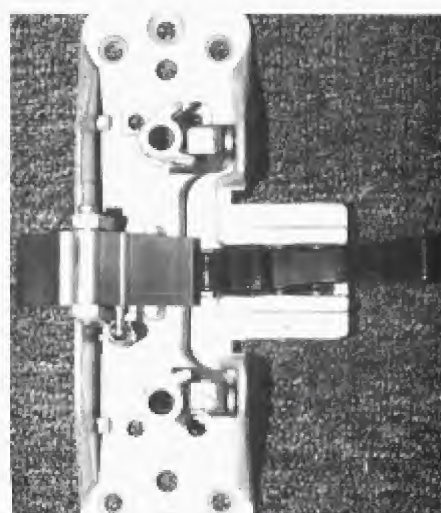
2. This old Best exit alarm is being replaced.



3. The Sargent 8888F exit device.

adjustment of the strike. With the Sargent device (see photograph 3), this procedure is not only the same, but is enhanced by the fact that the head and bar are attached separately altogether. (See photograph 4.) This alleviates the problem of trying to hold and balance the push bar end while attaching the head to the door. It also eliminates the need to remove the head from the door in order to attach the push bar's mounting bracket.

To start we made reference lines for the height and backset of the device. The recommended mounting height is 41" from the finished floor, so a horizontal center line was scribed on the door at this level. (See photograph 5.)



4. The head of the Sargent rim device is installed separately from the push pad.



5. Tony Hicks of the Northwestern University Lock Shop staff, measures for the horizontal centerline.

Continued on page 26

Continued from page 22



6. Measuring for the 2-1/4" backset centerline for the rim device head.



7. Marking the centerline

The next reference line is the vertical centerline for the head, or the backset. Using the Sargent #641 strike, a vertical line was scribed on the door at 2-1/4" from the door stop edge. (See photographs 6 and 7.)



8. using the Vix Bit to center drill the mounting holes.

At this point it is typical to attach the template to the door and mark for cutting the appropriate trim holes. But because cutting is not necessary, the head is held directly up to the door, aligning the reference lines on the



9. The Vix Bit is a handy tool for center drilling countersunk holes. They come in various sizes.

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door to the horizontal and vertical center of the rim device head. (See photograph 8.)

With the head held firmly in place we used a Vix bit to center drill a pilot hole for each mounting screw. The

Vix bit is a drill centering tool used on the countersunk mounting holes of this head. The tool, pictured in photograph nine, comes in varying sizes. A sloped head on the tool seats in the countersunk hole and aligns the

drill with the center of the hole. (See photograph 10.) A dandy device for accurate hole drilling.

Once the mounting holes are complete, the head is fastened to the door. (See photograph 11.)



10. The design of the Vix tool automatically centers the drill in the hole. This tool can be used wherever centering is critical, including hinges and other door hardware



11. Mounting the head to the door.



12. Sliding the push pad over the latch retracting the arm of the head.



13. Fastening the bar to the head.

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To attach the push bar, the end of the push bar tube is slid over the latch retracting arm on the head and slides gently into place. (See photograph 12.) Two screws are then used to fasten the push bar tube to the head. (See photograph 13.)

With the front of the push bar attached to the head, the bar is leveled

to the door and the back push bar tube mounting bracket is attached to the door. (See photographs 14 and 15.) With the bracket fastened to the door, the rim device is mounted to the door and we are ready for the strike. (See photograph 16.)

To attach the strike, we held the strike plate in place, making sure the

latch aligned at its center. (See photograph 17.) The strike was marked for position and fastened to the frame. (See photographs 18 and 19.) The job is complete. (See photograph 20.)

Thank you to the Northwestern University Lock Shop, Evanston, Illinois. (See photograph 21.)



14. Leveling the bar.



15. Fastening the rear mounting bracket to the door.



16. The rim device is fastened to the door.



17. Aligning the strike to the latch.



18. Mounting...



19. ...and adjusting the strike.



20. The Sargent rim device installed.



21. The Northwestern University Lock Shop crew, from left: Eric Jacoby; Dave Hicks; Tony Hicks, CPL; G.R.Zechman III, CPL; Clyde Roberson, AHC, CPL.

Test Article #29

AUTOMOTIVE SECURITY

To be tested in
December '93 issue
Details in front of issue

THE SAAB 900 IGNITION LOCK

*"This is part of our security Certificate Program.
In an upcoming issue, the content will be tested."*

The beauty of Scandinavian engineering has left the locksmith groping in fear whenever the three words "Saab 900 ignition" are mentioned. (See photograph 1.) This particular lock is unique to all currently manufactured vehicles in one respect—the cylinder is found in the center console between the two front seats. (See photograph 2.)

This location accounts for the common recurring problems of this lock, most noticeably broken keys. There are two primary reasons for ignition key breakage in these vehicles. (See photograph 3.)

The first is that the rather opened nature of this lock makes it a prime target for gathering debris, including soft drinks and snack food. As this debris accumulates in the lock the tumblers stick, preventing the key from operating correctly. The owner, unacquainted with the cause of the problem, turns and wiggles the key until it eventually breaks.

The second is caused by the key/shifter lockout feature of the model 900. In manual versions of this car, the key cannot be turned to the off position and removed until the shifter is moved to reverse gear. In automatic cars, the shifter must be in park before the key can be turned off and removed. Many inexperienced (and sometimes experienced) Saab 900 owners do not recognize this lockout feature and try to remove the key before placing the shifter in the correct gear. Believing the key to be stuck in the lock, the owner often tries forcing the key to the off position, only to find that the fragile key blade has broken off in the lock.

A second problem common with this key/shifter lockout design is the inability to turn the ignition towards the on position. This is more common to the manual than the automatic model and is caused when the shifter is moved out of reverse or park gear



1. The Saab 900.



2. The Saab 900 ignition is placed in the console between the front seats.



3. Notice how the design of the lock area makes a perfect gathering place for debris.

before the key has been turned to the on position.

Inside the shifter housing is a large gear that links the turning of the key with the position of the shifter. This is the gear that prevents the key from being turned to the off position before the shifter is placed in the reverse or park gear. And, when the key is turned to the off position, this gear prevents the shifter from being moved out of gear.

Many times, however, a person not familiar with the lockout design tries to move the shifter without turning the key. (This most typically is caused by unsuspecting car lot employees and/or tow truck drivers who want to push the vehicle to another location without getting the keys first.) Should the shifter be successfully moved without turning the key, the lockout gear is broken, bent or otherwise altered. Subsequently, the broken gear jams the ignition cylinder and the lock does not operate.

Solutions

If you find the problem to be a broken key/shifter lockout gear, refer the customer to a local Saab dealer. This repair can be completed by locksmiths with training and experience in removing and repairing the Saab shifter box assembly, but should not be attempted by the untrained.

In the case of a broken key caused by not having the shifter in the reverse or park position, simply put the vehicle's shifter into the correct gear, turn the ignition to the off position and extract the broken key. Using a new key, check to make sure the cylinder operates properly. If it does not, and the problem is caused by sticking or bent tumblers, remove the ignition cylinder.

If the key is broken because of an accumulation of debris in the lock, simply extract the key. Do not flush

the cylinder out with lubricant. Aside from the debris having no place to flow, the lubricant will drip out of the cylinder and soak the carpet area beneath the console area. Also, the key buzzer switch is directly below the cylinder and may become damaged.

Ignition Removal

Should cylinder removal become necessary, there is no need to fear. Removal is accomplished in three steps or phases: Front seat removal, console removal, and cylinder removal. For this article the ignition of a 1986 Saab 900 with manual transmission is being removed. Other model years have varying wiring connectors on the console but remain very similar overall. In all cases, it is a safe procedure to first disconnect the battery.

Removing the front seat

To gain access to the ignition retaining pin it is first necessary to remove the front seat. In most cases, only the driver's seat needs to be removed. To better view the complete removal, however, both front seats were removed for this article.

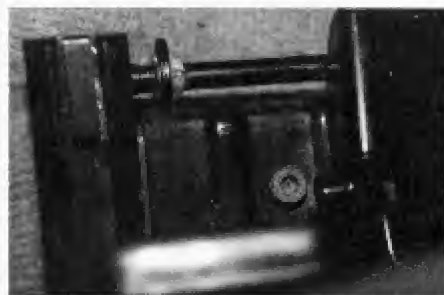
The front portion of the seat frame is attached to the body using 7mm,

allen head bolts. (See photograph 4.) There are only two of these bolts, each one located in a metal mounting bracket found at the front inside part of the each seat slide rail. (See photograph 5.) After removing these two bolts, tilt the seat back. (See photograph 6.) Reaching under the seat, label and then disconnect any wire harnesses. (See photograph 7.) In this particular vehicle there were two connectors.

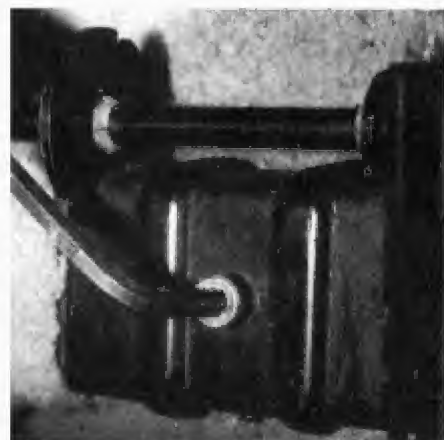
With the wiring disconnected push the seat towards the back of the car and then tilt backwards. The back part



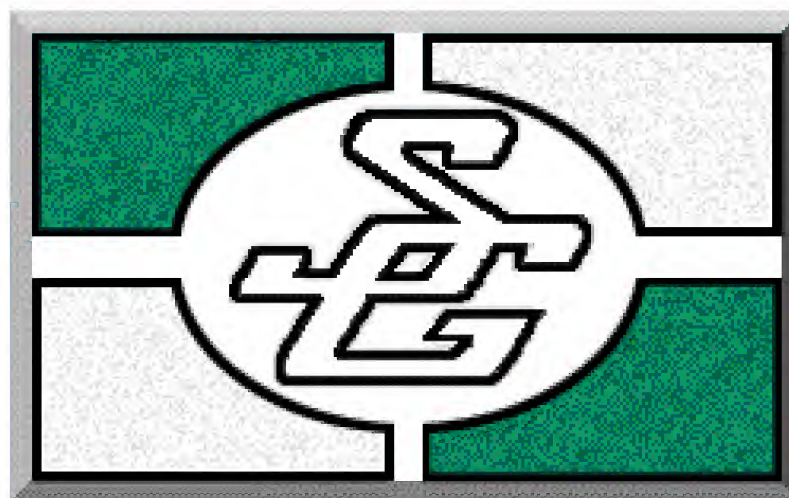
6. With the front brackets removed, tilt the seat back.



4. One of the two front seat mounting brackets. The Allen head bolt is the only fastener on this bracket.



5. Use a 7mm Allen wrench to remove the bolts.



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7. Label and remove any connectors

of the seat frame is attached to the car via a T-bracket. (See photograph 8.) Moving the seat back and tilting allows the bracket to be removed from its mounting position, and the seat can be taken out of the vehicle. (See photograph 9.) Removing the seat allows easy access to the center console. (See photograph 10.)

Removing the console

Go to the back of the console and remove the ashtray. (See photograph 11.) Below are two T-20 Torx head

screws. Remove the screws. (See photograph 12.)

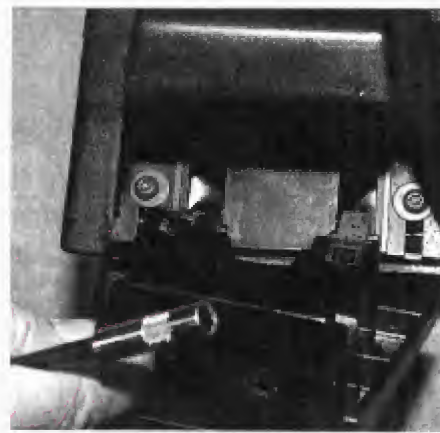
Next, carefully remove the bottom of the shifter boot from the console. (See photograph 13.) The boot is held in place by a lip that forms around a metal bracket on the console top.

Pulling the boot up reveals two more T-20 Torx screws. Remove these two screws. (See photograph 14.)

Now gently pull up on the front of the console and lift this top portion over the shifter and remove it from the vehicle. (See photograph 15.)



8. This "T" bracket is used for fastening the back part of the seat to



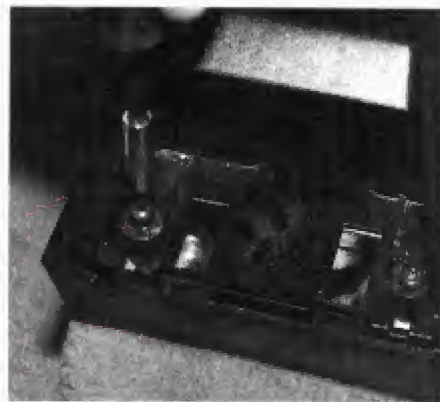
11. Remove the ashtray at the back end of the console.



14. Remove the screws holding the front of the top console in place.



9. The "T" bracket tilts in to and out of this open floor bracket.



12. Remove the screws.



15. Lift the top console piece up over the shifter.



10. With the seat removed the console is easily accessible.



13. Gently remove the shifter boot from the boot bracket.



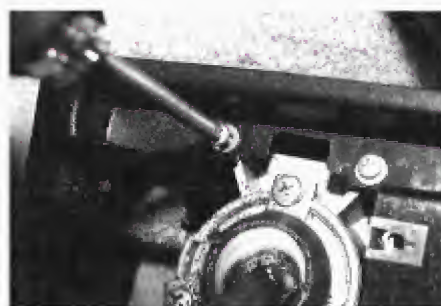
16. Make sure all electrical connections are disconnected before removing the console piece.

Make sure to disconnect the wire connector of the switch found in this console piece. (See photograph 16.)

Removing the top portion of the console reveals the screws that hold the bottom portion of the console in place. (See photograph 17.)



17. With the top part of the console removed, the shifter housing and ignition switch are exposed.



18. To get the ignition cylinder retainer the bottom console piece must first be removed. Take out the two bottom console screws found at the front of the shifter area.



19. Then remove the screw found near the ignition cylinder near the console light. Notice the build up of debris along the outside of the cylinder. The transparent ring around the lock is green in color and used to light the lock face.

Moving up to the shifter area again, remove the two screws that hold this bottom portion to the shifter housing. (See photograph 18.) Then remove the next screw found down by the ignition cylinder. (See photograph 19.)

Gently lifting from the back, pull the bottom console portion up over the seatbelts and shifter. (See photograph 20.) Make sure that the bulb that lights the ignition face is pulled out from the bottom of the console, and any other electrical wiring disconnected. It's now time to remove the cylinder. (See photograph 21.)



20. Lift up on the back of the console piece and lift it over the seatbelts emergency brake handle and the shifter.

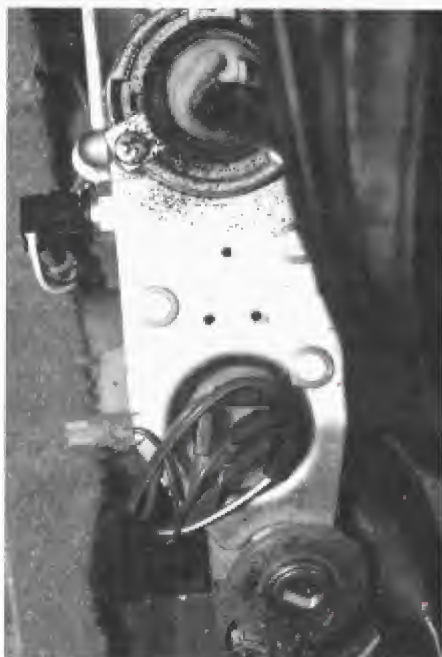


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21. The complete shifter housing is exposed and the lock cylinder ready for removal.

Removing the cylinder

With the console removed, access to the cylinder's retaining pin can now be made. To do so, locate the flat spot at the bottom of the housing and in line with the bottom end of the ignition cylinder. In this vehicle a large bright circle was found. (See photograph 22.) In many Saabs there is a plug that can be punched or drilled. In this car, there was no plug, so a 3/8" drill was used. (See



23. Using a 3/8" bit, an access hole was drilled.

photograph 23.)

Drill the hole perpendicular to the center of the lock cylinder just deep enough to enter the hollow area just below the surface of the casing. The cylinder retaining pin is now visible. (See photograph 24.)

After turning the ignition plug to the on position, use a scratch awl or punch to depress the retaining pin and pull the cylinder from the shifter housing. (See photographs 25 and 26.)

In many instances, the plug cannot



25. Turn the key, depress the retainer and pull the cylinder out of the housing.



26. The key code is stamped along this rib on the cylinder wall.



22. Locate the small flat area at the bottom of the housing in line with the lock cylinder.



24. Just visible in the hole is the cylinder retaining button.

Continued from page 34

be turned. In this case, drill the plug from the cylinder or drill the retaining pin off of the cylinder.

Do not, however, use a punch and hammer to drive the retaining pin into the cylinder and plug. While this method has been suggested by other writers and magazines, the possibility of damaging the key buzzer switch is too great. This switch is comprised of a thin metal shaft that protrudes up the center of the cylinder, with its base attached to the shifter housing at the bottom of cylinder cavity. Hitting or punching the lock in any manner can easily damage this delicate shaft and accompanying switch. (See photograph 27.)

With the cylinder removed, disassemble and rebuild using Auto Security Products' A-28-101 keying kit. Replacement ignitions can be obtained from any Saab dealer and rekeyed to fit the customer's working key using the same ASP keying kit.

Reverse the above procedure for reassembly.



27. While difficult to see, the key buzzer shaft can be seen in the housing center.

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Test Article #30

ELECTRONIC SECURITY

To be tested in
December '93 issue
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BASIC ELECTRICITY, PART II

*"This is part of our security Certificate Program.
In an upcoming issue, the content will be tested."*

Last month we introduced some important information in understanding electricity including two important equations: Ohm's Law and the power or watt equation.

As you may remember, electricity starts with the atom: the protons at the center with a positive charge, and the electrons orbiting the protons with a negative charge. Electricity is basically the movement of the electrons from the orbit of one atom to the next.

An important aspect of electron movement is the direction in which they flow. Conventional electrical flow (developed by Benjamin Franklin and his experiments with electricity) represents the direction of electricity as moving from the positive pole to the negative pole. This is still the accepted method for displaying electrical drawings.

The truth of the matter, however, is that the negatively charged electrons move towards the positively charged pole. In other words, the direction of true electron flow is actually opposite of the conventional flow used to describe electrical circuitry. (See illustration 1.)

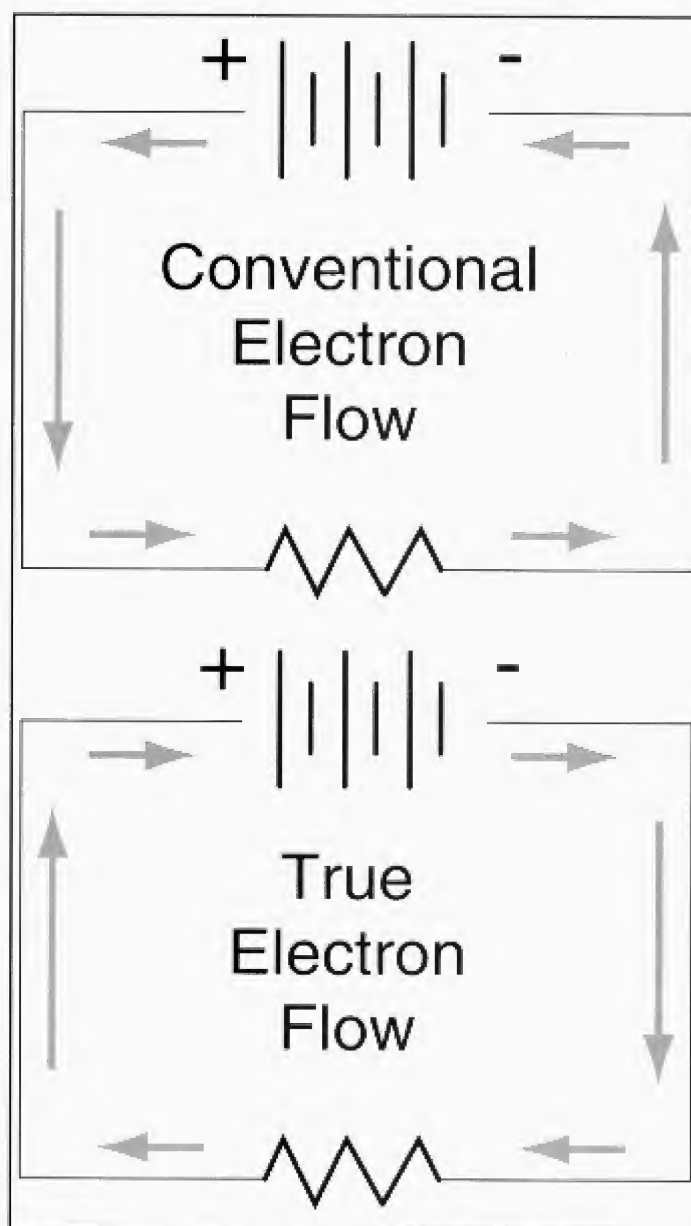
An electrical circuit is made up of a loop, and in some cases numerous loops, through which the electrons flow. A loop includes the power source (battery, generator, wall outlet, etc.), the conductor that forms the path for the electrons to flow (copper wire, copper circuit board runs, etc.), and a load (electrical components that alter the electrical flow or perform work). (See illustration 2.) In a loop, the electrons flow from the negative side of the power source, through the conductor, through the load and back to the positive side of the battery.

For example, an electric strike installation is a simple circuit or loop. This loop is made up of a power source (transformer or power supply), a conductor (the wire), and a load (the electric strike). The characteristics of each part of this loop determine how well the whole system or circuit works. If any of the components are not compatible, the system may not work well, or work at all. In some cases, incompatible components can cause damage to parts of the loop.

Kirchoff's Voltage Law

It's at this time we introduce a new equation—Kirchoff's Voltage Law. For by applying the varying forms of Ohm's Law and Kirchoff's Voltage Law we can determine the electrical characteristics that will be present in any given loop, and be able to determine what specifications are required for the varying components of any given loop.

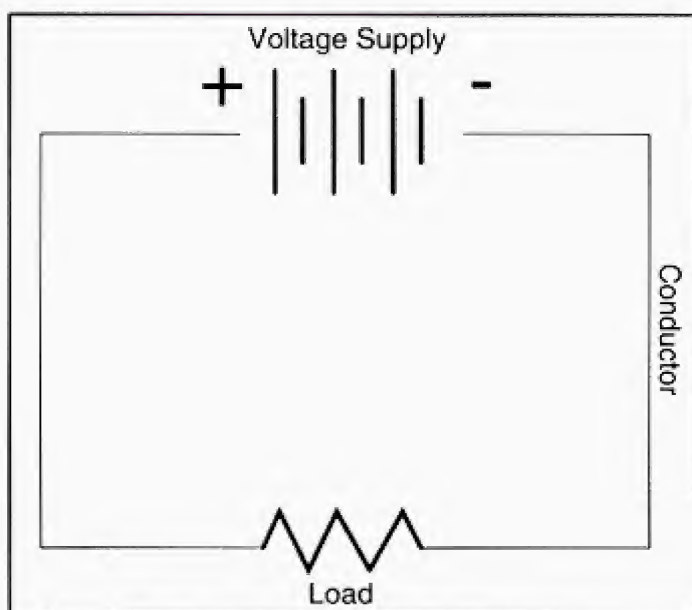
In short, Kirchoff's Voltage Law says that the sum of all voltages in a complete electrical circuit always adds up to zero. In other words, the sum of all the positive voltages in a circuit or loop, is equal to all the negative voltages found in the same loop. Or, to go on further, for each voltage rise, there must be an equal voltage drop somewhere in the



1. All conventional electrical flow, started by Benjamin Franklin, is the form we use for diagramming electrical circuits. It is opposite of the true electron flow.

circuit or loop.

How does this work? Applying a power source, let's say a battery, to a conductor causes a voltage rise. As we trace along the conductor we find a load, maybe an electric strike, magnetic lock, or even a resistor that causes resistance and an accompanying voltage drop. The voltage drop may be



2. An electrical circuit or loop always contain a power source, a conductor, and a load.

distributed across a number of loads, such as several electric strikes, magnetic locks or lights that are strung together. According to Kirchoff's Voltage Law, however, the sum of each individual voltage drop MUST always be equal to the voltage rise supplied by the power source.

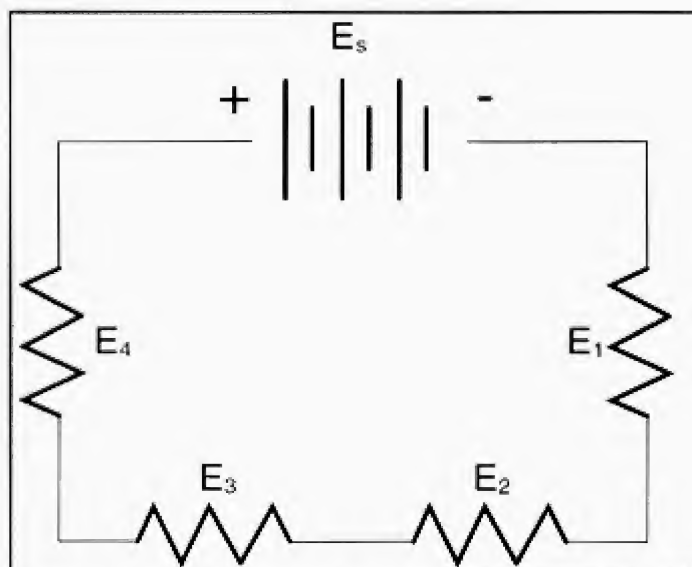
In equation form, Kirchoff's Voltage Law is demonstrated this way:

$$E_s = E_1 + E_2 + E_3 + E_N$$

or

$$E_s - E_1 - E_2 - E_3 - E_N = 0$$

Where E_s is the supply voltage (voltage from the power source) or the voltage rise and E_1 , E_2 , E_3 , E_N are the voltage drops caused by the different loads within the loop. (See illustration 3.)



3. Using Kirchoff's Voltage Law, adding all of the voltage drops together (E_1 , E_2 , E_3 , and E_4 in this loop) must equal the voltage rise of the voltage source (E_s in this loop). Or, all voltage rises added to all voltage drops will equal zero.

Let's make this equation a little more understandable by using it on an actual loop. Before doing so, however, we need to follow a few rules for making the measurements:

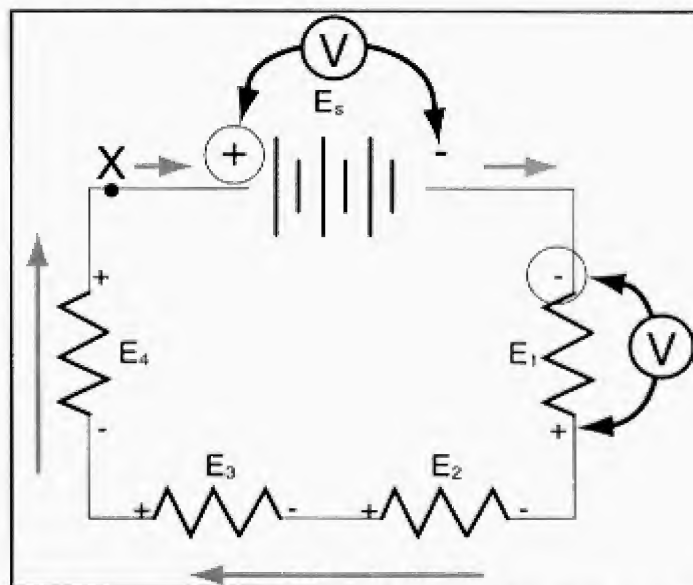
1. Always trace the circuit following the true electron flow. Remember, electrons flow from the negative terminal towards the positive terminal.

2. Tracing the circuit following the electron flow, all voltage sources (power supply, battery, etc.) are voltage rises and are preceded by a plus (+) sign in the equation.

3. Tracing the circuit following the electron flow, all loads (strikes, lights, resistors, etc.) are voltage drops and are preceded by the minus (-) sign in the equation.

The plus (+) and minus (-) signs before a source (either a voltage supply or a load) are the natural result of tracing a circuit following the true electron flow direction. When tracing through the source the first terminal encountered in the trace is the proper sign for that source.

For instance, starting anywhere within a circuit, as we trace and come upon a voltage supply, the first terminal encountered is a positive or plus (+) terminal. As we continue to trace through the circuit and come upon a load, the first terminal to be encountered is a negative or minus (-) terminal. (See illustration 4.)



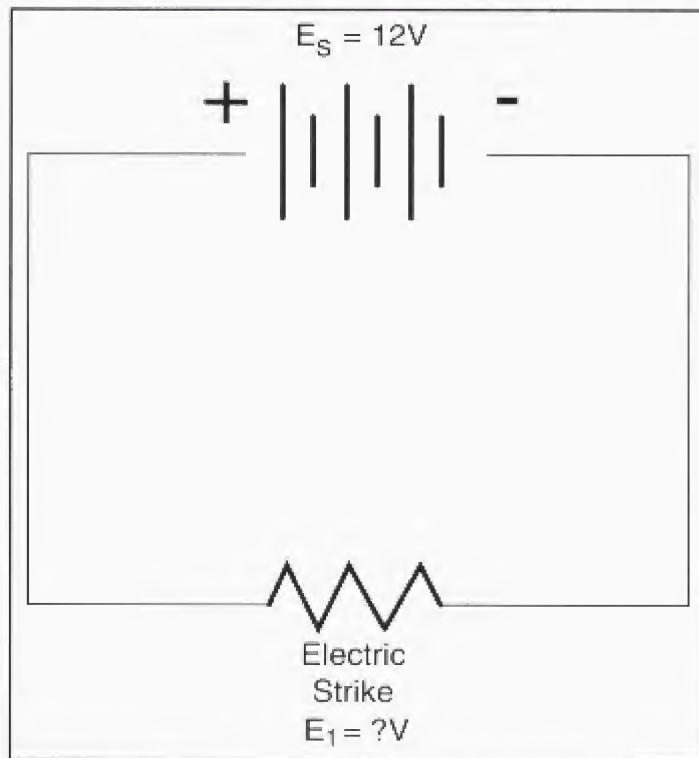
4. Starting at the X and tracing this loop in the direction of the true electron flow, we run into the first terminal of a source (the voltage supply, E_s) and find it to be positive or plus (+). Placing the voltage for this source into Kirchoff's Voltage equation, then, it is preceded by a plus (+) sign. Continuing the trace we come upon the first terminal of the next source (load, E_1). this terminal is negative or minus (-). When we place the voltage for this source in the equation, then, it is preceded by a minus (-) sign. Continuing the trace and ending back at X we create the following equation: $+E_s - E_1 - E_2 - E_3 - E_4 = 0$. This is Kirchoff's Voltage Law.

Now for a couple of working examples. We will start off with the simplest scenario and work into some harder ones. At this point we are going to ignore the internal resistance of the voltage source and the resistance of the cable or wire and button or switch.

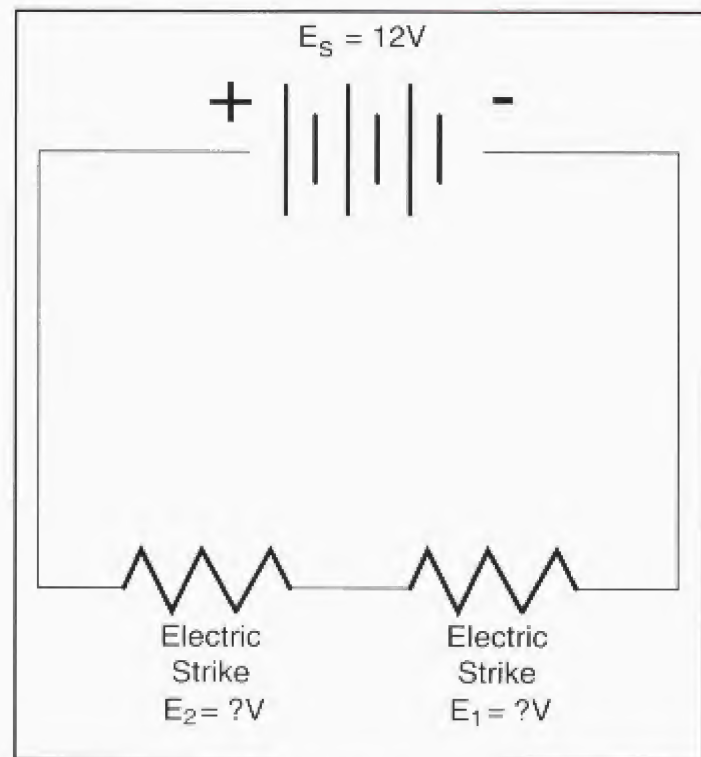
A building owner wants one electric strike installed at his reception area. We are given a 12 volt power supply and an electric strike. According to Kirchoff's Voltage Law all voltage rises MUST BE EQUAL to all voltage drops. In tracing our loop or circuit we see that the 12 volt power supply gives us a 12 volt rise. Therefore, the electric strike that we use MUST give us a 12 volt drop. This, of course, is

accomplished by using a 12 volt strike. (See illustration 5.)

This is a simple example, so let's add a small twist to the customer's order. The customer now has two doors that he



5. Knowing that E_s is 12 volt rise, we know that the voltage drop of all the loads in this circuit must be 12 volts. Because there is only one electric strike, this strike must be 12 volts.



6. Like the last example we have a 12 volt rise in the loop. Therefore, the total voltage drop must be 12 volts. Because we now have two loads (the two electric strikes), however, we know that their voltage drops added together must equal 12 volts. This can be done in any manner that is possible. For example, two 6 volt strikes can be used. Or, one 4 volt and one 8 volt strike can be used.



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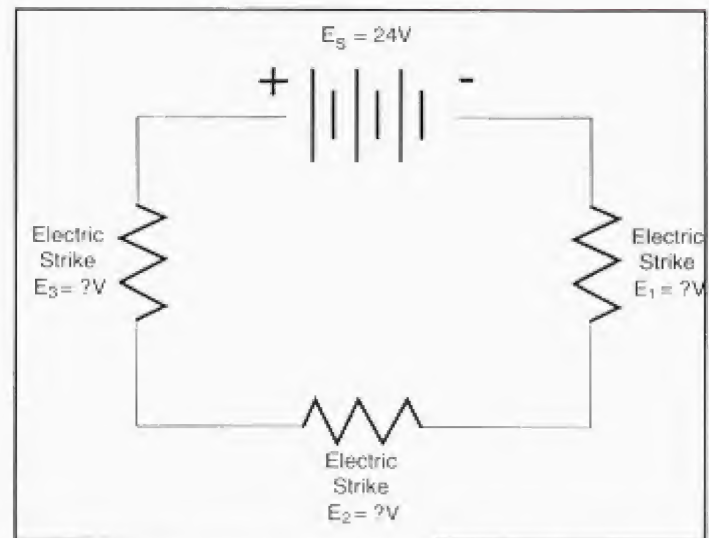
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wishes to operate by electric strikes. We are given a 12 volt power supply and two electric strikes. Again, according to Kirchhoff's Voltage Law all voltage rises MUST BE EQUAL to all voltage drops. Tracing our circuit again, we find that the power supply gives us a 12 volt rise.


Now, however, we have two strikes or loads in our circuit. According to Kirchhoff's Voltage Law, then, the voltage drops of both loads when added together MUST equal the voltage rise. Therefore, both of our strikes, when added together, MUST give us a total voltage drop of 12 volts. This can be accomplished in any manner we wish. We could use two 6 volt strikes. Or, we could use one 3 volt strike and one 9 volt strike. It does not matter how the voltage drops are distributed between the two strikes, just so that when they are added together it equals 12 volts. (See illustration 6.)

What if we are given a 24 volt power supply and three electric strikes? The same rules apply: Tracing through the circuit we find that the power supply gives us a rise of 24 volts. Obeying Kirchhoff's Voltage Law it is necessary that the total voltage drop of the three electric strikes equal 24 volts. This is probably best achieved by using two 12 volt strikes and one 24 volt strike, although three 8 volt strikes may also be used. (See illustration 7.)

As life has it, however, we aren't always given perfect circumstances. For instance, what happens if our loop or circuit consists of a 24 volt power supply and a 12 volt strike; or, a 12 volt power supply and a 24 volt strike? While we may instinctively say in the first case the electric strike will burn up and in the second case the strike will not operate at all,



7. Like the last example, we have a voltage rise and multiple loads. When added together the voltage rise must equal the total of the voltage drops. In this example, we have a 24 volt rise and three loads. To achieve the correct amount of voltage drop, each strike can be 8 volts; or, we can have one 12 volt and two 6 volt.

how do Kirchhoff's Voltage Law, Ohms Law and the Watt equation apply? We will take a close look at these circumstances next month. 



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MANUFACTURER PROFILES

"Here is a closer look at a number of the manufacturers serving the locksmith market place."

All-Lock Co. Inc.

All-Lock Co., Inc. was established in 1973 in Selma, Alabama. The original plant building was constructed in 1951 as Independent Lock Co., of Alabama. This was the Alabama Division of ILCO, which had corporate offices in Fitchburg, Mass.

General Automotive Specialty Co. purchased the Automotive part of the business along with the plant facility in 1973 and started All-Lock Co.

At that time All-Lock consisted of one plant and approximately 115,000 square feet. Today that has increased to two plants in Selma and one plant in Matamoros, Mexico with a total of approximately 250,000 square feet.

The casting facility is presently in the final stages of being totally revamped from multi-cavity casting equipment to high speed, high tech equipment. The plating facility is state of the art and almost completely computer operated.

Millions of keys are produced each month on various types of automated equipment in the key department. All-Lock produces quality key blanks to be used in Chrysler, Ford, General Motors and Industrial lock cylinders.

All-Lock's greatest asset is the work force. All-Lock has over 750 employees dedicated to serving our customers. All-Lock employees are experienced and dedicated to producing the finest lock cylinders in the world. The highly qualified staff consisting of a well balanced blend of youth and experience utilizes past knowledge while planning for future growth.

Latest computer aided design equipment and over 200 years of combined engineering expertise, plus direct involvement with the major car manufacturers engineering groups keeps All-Lock at the forefront of the industry. This expertise carries over into other security products and tools developed by All-Lock.

All-Lock's reputation for quality was foremost in creating the Honda/All-Lock joint venture. All-

Lock currently produces 100% of the locks assembled in all Hondas manufactured in Marysville, Ohio. Also, All-Lock was Awarded the lock contracts for Saturn Car Co.

All-Lock recently announced the addition of import car locks to the aftermarket customers. These locks will be manufactured in the Selma Alabama plant.

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Auto Security Products

Founded in Houston, Texas in 1980 to provide the American locksmith industry with imported car lock parts, Auto-Security Products (ASP) has grown today into a multi-million dollar company with sales of OE quality foreign and domestic car locks and lock parts all over the world.

By the mid-1980's, ASP president Buddy Logan realized he had to move to a location closer to his source of supply. So, in 1986 ASP moved to Kirkland, WA just outside of Seattle. This is the closest location available to all Asian container ports, which allows for quicker shipping of products to ASP so they can get them quickly into their customer's hands.

But, one thing has never changed. ASP still puts service of its customers first. Whether the company has only some 100 locks and lock parts to sell, as in 1980, or the more than fifteen hundred available today, serving the needs of its customers through OE quality parts and education is still the mission of ASP.

Today, ASP conducts educational seminars for locksmiths all over the world and provides written materials to help make the job of the locksmith a little easier and more profitable.

Additionally, ASP is the true complete supplier with locks and lock parts for not only Japanese, Korean and European vehicles but also some American as well, including the only Ford 10-cut OE ignition locks not available from the dealer.

As the decade of the 1990's

continues, ASP led by Buddy Logan and supported by a dedicated staff will keep on growing with new products for the locksmith. And the company will never lose sight of its original mission to provide the best service possible to the locksmith industry through OE quality products and top flight education.

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Briggs & Stratton

Through advanced technology, innovative engineering, precision performance testing and just-in-time manufacturing and delivery, Briggs and Stratton has remained the leading worldwide manufacturer of automotive locks and keys. The company has approximately 87% of the domestic O.E.M. market share with additional growth expected within two years.

At its 318,000 square foot manufacturing plant in Glendale, Wisconsin Briggs & Stratton Technologies produces up to 250,000 lock sets a day. The company manufactures 1,500 different automotive parts including door handles, compartment latches, and precision components for other lock manufacturers. Briggs & Stratton has the most complete inventory of automotive locks and related items in the industry.

In addition to its automotive line, Briggs & Stratton Technologies also manufactures locks and lock products for trucks, recreational vehicles and boats. Through the company's innovative engineering its automotive locks have been adapted to the industrial market. The high security, weather-resistant features of these locks make them ideal for outdoor industrial applications.

From its beginning, Briggs & Stratton has always been at the cutting edge of technology. Some of the early locksmith products manufactured by the company were padlocks keyed to the owner's car key and used to unlock the spare tire, and

a universal key machine that could cut almost any key available at the time. By 1929 Briggs & Stratton had grown to become the largest manufacturer of automotive locks and keys in the world.

While technology has advanced considerably since the company was founded by Harold Mead Stratton and Stephen Foster Briggs in the early 1900's, one thing has remained constant—the commitment to provide the best quality products technology has to offer.

Briggs & Stratton has always been service-driven, with customer satisfaction being an integral part of the company's philosophy. For the locksmith industry, this means that a complete line of quality engineered replacement parts that can be easily installed are readily available. Detailed instruction manuals and hands-on workshops provide locksmiths with the information they need, when they need it.

A full line of replacement parts are ready for shipment to locksmiths through Briggs & Stratton's extensive network of authorized automotive service distributors.

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Dortronics Systems, Inc.

Dortronics Systems, Inc. is a manufacturer of electromagnetic locks and security control devices. Electromagnetic locks were first introduced only twenty-five years ago. However, Dortronics parent company, Sag Harbor Industries, has been in existence almost twice that long. Charles Edison, son of Thomas Alva Edison, established Sag Harbor Industries, Inc., in 1946 to manufacture electronic products. Edison and his original staff of twelve had the vision to foresee the importance electronics would play in our future. In its early history the company supplied coils chiefly for use in the clock and toy industry. Today, Sag harbor coils are used not only in the Dortronics electromagnetic locks, but also throughout the entire electronics and aerospace industry.

The company now has more than two hundred employed in facilities which include over 70,000 square feet of manufacturing space. Electric locks, transformers, and printed circuit assemblies are designed and produced in-house to meet the exact specifications of

Dortronics' customers. The latest test equipment and rigid quality control assure close tolerance production of Dortronics' reliable products. The precision, that went into the Sag Harbor coils now on the moon, is evident in the Dortronics electronic security equipment produced today.

Recent management changes in the Dortronics Systems group are responsible for the reorganized national sales force and improved sales literature for the dealers. A new Dortronics product catalog will include an electromagnetic lock with a

1600 pound holding force and an electrically operated security cabinet lock. Sag Harbor's automated manufacturing equipment will soon produce an improved NFPA 101 delayed egress controller for the Dortronics line. A universal programmable door controller and a multiplexed input/output controller are other Dortronics products to be introduced in the coming months.

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Federal Lock Company

Experience, quality and service are the cornerstones for Federal Lock Company's new line of padlock and security products. Federal Lock recently introduced its broad range of padlocks to the security industry at the 1993 ALOA show. Products range from Solid Steel (the 1 3/4" Model #100, the 2" #200, and the 2 1/2" #300) to the Shrouded Shackle padlocks (Model #200P, #300P, 500P and 600P). Also included is the "Lock Tech" series which offers five of the most popular commercial door keyways (Schlage C, Corbin 60, Weiser, Yale, and Arrow) and the "OEM Tech" cylinder system padlocks, which accept Schlage® Series A 6 pin cylinders and compatible cylinders from the following manufacturers (ASSA®, Lori®, Medeco®, and Primus®).

The "Classic Steel™" product line, includes a round, hardened steel, concealed shackle design (Model #400), and the long-accepted round steel construction of the Model #900.

"Product serviceability is a key factor in Federal Lock's philosophy in the development of its padlocks. Federal Lock has responded to years of hands on experience and knowledge of competing products in the entire security industry", according to Kenneth R. Erickson, President.

To complement its full line, service parts and pinning keys, as well as collars, chains and identification tags are available. In addition, most padlock models are available in varied shackle lengths for added versatility.

Rounding out its product line is a complete range of quality nickel plated hasps, including Model #4025, a heavy duty hinged bar designed exclusively for use with its shrouded model numbers.

With innovative designs already planned for the future, Federal Lock will continue to be a leading responsive force in the security industry's demand for quality products and service performance levels.

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Hanchett Entry Systems

Hanchett Entry Systems, Inc. has been in the business of developing and manufacturing Electric Strikes and related products for more than 17 years. H.E.S. utilizes many locksmiths

and security/access control installers throughout the country as field consultants, aiding in the development of their product designs. This approach has given H.E.S. the added insight to produce innovative designs which fill significant voids in the industry, while providing high quality, reliable products for the user.

In 1976 H.E.S. designed the model 1003A, which was the first electric strike capable of releasing a lockset with a 1" deadbolt. A few years later H.E.S. recognized another industry need and introduced the model 1003K, the first electric strike designed specifically for the offset mortise lockset. Today, the 1003 series electric strike line consists of 22 different models, which are fully interchangeable, non-handed and can be installed in hollow metal, aluminum or wood jambs. The 1003 series is able to accommodate virtually every type of lockset designed to utilize the 4 7/8" jamb cutout. These units are U.L. Fire Door and Burglary Resistance listed, have been tested to withstand a force of over 2300 lbs. before releasing, and are tested to exceed 1,000,000 cycles of operation. H.E.S. backs the quality of the 1003 series electric strikes with a five (5) year warranty.

In 1989 H.E.S. again responded to the industry's needs with the development of their 7000 series, the first electric strike line capable of being field reversible between fail secure and fail safe. The H.E.S. 7000 series is also the first electric strike line designed to be capable releasing under a tremendous door loading, which would bind other electric strikes.

The company again, expanded its forward thinking with the recent introduction of the 7000 series C-Pac, offering the locksmith "inventory in one small box." The 7000 series has a modular design enabling it to be converted into three different models. One for the ANSI 4-7/8" jamb preparation, one for an aluminum or wood preparation and another to accommodate a rim-mounted panic exit device. This is achieved by three different face plates and one basic electric strike body. The solenoid is internally mounted inside the unit, and designed to be symmetrical. This allows it to be easily converted between fail secure and fail safe. The 7000 C-Pac provides all three mounting styles, two solenoid assemblies, a plug-in bridge rectifier and all of the needed mounting

hardware. Therefore, this one electric strike package provides 12 and 24 volt, fail secure and fail safe, AC and DC operations, with the three mounting styles all in one small box.

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HMC International

HMC International (Originally Howard Mfg. Co.) was begun in 1963 by Graham W. Howard, Sr. "Gray" Howard brought a wealth of design engineering experience to his company gained over three decades overseas with such corporate giants as the United Fruit Company.

HMC immediately fulfilled requirements for the Rubber Industry by designing and developing V-Belt Tension Testing instruments. Within a remarkably short period of time, HMC introduced a wide variety of belt tension testing devices capable of accurately testing tension in light duty, automotive and industrial belts. Now, HMC offers gauges which are capable of testing tensions from 0 to 10,000 lbs. on belts as small as 1/4" wide or as large as 12" wide.

The Elevator Industry required an instrument to measure door closing force, so HMC developed its first door pressure gauge. In addition to the Lbs./Kgs. scale on the plunger rod, which measures force, the DPG has an inches/centimeters scale on its barrel to measure V-belt tension and equalize elevator cable tensions.

HMC International now offers seven instruments designed specifically to measure door opening/closing force. The DPG has a force from 0 to 35 lbs. and the smaller U237X measures force from 0 to 7 lbs. Both of these units are also available in "Push/Pull" variations. Other force measuring devices offered by HMC are its AWI-II and AWI-III models, which measure force from 0 to 66 and 0 to 99 lbs. respectively.

With the advent of the ADA and its references to specific requirements regarding door opening and/or ramps, HMC developed two new products.

HMC International designed a new Door Pressure Gauge (DPG-20) to measure force between 0-20 lbs. This gauge also provides force readings in Newtons and Kilograms.

Another unique product is offered by HMC International. The 20-12 SM Slope Measuring Device and Level provides an immediate determination of ram slope for the handicapped.

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HMC international Div., Inc. is continuing its research to develop even more instruments to meet a wide range of customer requirements and gratefully welcomes calls to its President, Tito L. Howard.

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HPC, Inc.

HPC, Inc. has been designing and manufacturing security products for over 37 years. HPC continues to expand into new areas, while remaining true to their primary market—locksmiths.

HPC specializes in manufacturing products for locksmithing, security, industrial, office and automotive markets. These products include a wide variety of key cutting machines, including the famous 1200CM code cutting machine and The Codemax™ (1200MAX), the original computerized code cutting machine (with fully compatible software). HPC also manufactures The Punch Machine™ (1200PCH). It works on the same principle as the 1200CM Code Machine, yet is completely portable. The Punch Machine™ comes with HPC's Little Mac™, enabling you to make your own cards. HPC manufactures ready-made cards for The Punch Machine™ and continues to produce a variety of cards for the 1200 PCH.

HPC also manufactures a complete line of security key control systems including metal key cabinets (KeKabs) that range in capacity from 8 to 730 keys (either in a one or two tag system), specialized security cabinets (chemical and medicine cabinets), key control racks and key keeper boxes.

HPC offers an extensive line of door hardware and guard plates. Plus they offer a wide selection of locksmithing tools, picks and pick sets, car openers and other related products. Everything from pins and springs to precision micrometers and assembly tools are available through an Authorized HPC Distributor.

HPC is also a publisher of technical manuals, a quarterly publication, textbooks and up-to-date books and code referencing materials. The code books provide over 9000 pages of lock codes and lock code information from around the world.

HPCSoft, the software division of HPC, produces standard-setting masterkeying, key blank cross

referencing and key control record keeping. HPCSoft's newest program is its Five level master keying software.

HPC Services Division is devoted exclusively to the HPC customer. Through a toll-free 800 number, an HPC Service Technician can answer questions and help with repairs.

Whether you are a beginner or an accomplished veteran, HPC is able to fill all of your locksmithing needs, with its wide range of products and services.

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Jet Hardware Mfg. Corp.

Jet Hardware Mfg. Corp., Brooklyn, NY was founded in 1977, by three very close and good friends who shared the same professions. Alfred Schonberger, George Buchinger and Fred Lang were engineers and tool and die makers in the lock and key industry.

They envisioned a need for key blanks to be manufactured using the highest quality brass and nickel silver available with precise tolerances and competitive pricing for the locksmithing industry. To obtain their objectives, they decided that Jet Hardware would not depend on outside vendors. All of the tooling, blanking dies and milling cutters for the various key blanks are formed in the tool and die department of Jet Hardware.

Once the base product was completed and marketing began, it then became necessary to consider the aesthetics. Designs were placed on the key bows to simulate the original manufacturers designs. The "DITTO +" line was born ("ditto" meaning duplicate of original). The "+" stands for a very neat incised identification symbol that is placed on the blade or bow. This replaced the standard methods of identification numbers encircled with a large round ring. Starting with about twenty-five popular key blanks, Jet now manufactures close to one thousand line items. Except for some flat steel keys, they are made of brass or nickel silver. Key blanks produced include high precision commercial and residential, domestic and foreign auto, safe deposit, tubular, hotel/motel and keys with bows of an illusive shape and design.

To further assist locksmiths in

their efforts to offer customers high grade professional service, the "Personaline" was added. In 1992, Jet acquired the "Neuter Bow" line. With these products locksmiths can have their own firm's or their customer's name and data neatly incised into Jet's standard and "Unibow" keys. The "Neuter Bow" Series key blanks are coined and embossed. The "Personaline," Unibow" and "Neuter Bow" series of blanks are manufactured for professional locksmiths who need and want customized keys.

Jet hardware offers standard manual and semi-automatic key machines. In addition, Jet has a high speed, extremely versatile and accurate, semi-automatic machine, designed for the professional locksmith. Included in their key machine department are popular key machine cutters that are manufactured from FM2 steel.

Newly designed key displays of flat boards, simple rotary racks and attractive key towers are available. Various key assortments are packaged for the trade. All of these selling aids are designed to enable locksmith stores to compete in today's market place.

Of special interest is the thousands of dollars that locksmiths have contributed to the American Cancer Society through Jet. In 1991, locksmiths were asked to send Jet a check for \$1 or more, payable to the American Cancer Society in exchange for their catalog. Jet forwarded these contributions to the American Cancer Society and in turn, sent the catalogs at no charge to those who contributed. Countless letters were received by Jet complimenting them on this idea. Jet takes great pleasure again this year in repeating the same charitable program for their new 1993 catalog.

Kustom Key

Now in its 21st year, Kustom Key, Inc. is the producer of quality after-market key blanks that are available in over 500 commercial keyways, including many that are difficult to find. A very popular choice of Locksmith Professionals nationwide, is their K3 Neuter Bow. This key is manufactured using its own special headshape with no identifying brand names or numbers, a feature that helps protect the locksmith's customers from having their keys

uplicated without proper authorization. Another feature is its availability with the shop's name and/or logo incised or embossed on the head of the key, a feature that advertises to your customers inexpensively.

Another popular product is their Large Bow Key Blanks, used in hotels and resorts across America. These highly attractive guest room keys are available in five different shapes using a variety of finishes including custom embossed logos and special messages. These keys are manufactured in brass or nickel silver for extra strength in over 500 commercial keyways.

Their newest line which is gaining tremendous popularity in the consumer market is LaKey. These large head keys are manufactured from quality brass and are embossed with beautifully detailed graphics. They are perfect for the customer who may want a key that is easy to manipulate, easy to find quickly in the dark, or attractive and stylish. LaKey is available in seven popular keyways. (KW1, SC1, WK1, AR1, DE1, Y1, & WR3) An inexpensive starter kit is available complete with a colorful

counter display and window poster that is sure to gain the attention of your customers and keep LaKey selling at a steady pace.

In twenty one years Kustom Key has become known nationwide for its first class quality and customer service and has every intention of maintaining that reputation.

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Major Manufacturing

With the introduction this year of the largest number of new tools and jigs designed for the professional locksmith, Major Manufacturing continues to provide sound solutions to the locksmith's daily challenges.

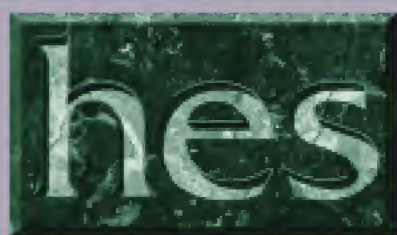
Established in 1976 as a family business, Major Mfg. soon developed a reputation for innovative product development, quickly responding to the changing needs of its growing clientele. Bill DeForrest, second generation to manage the firm, takes a very active role in all aspects of the business, from development and design of individual products, to production and marketing of their growing catalog of tools and lock-related products. In fact, the company

holds numerous patents for its innovations.

Since the Kee-Blok, the company has expanded its catalog with such popular items as their Schlage Cylinder Cap Tool, a special tangle-resistant cylinder spring, and a hardened cylinder guard—all responses Major Mfg. has made to the needs of its manufacturing and locksmith clientele.

As Major Manufacturing moves into the mid-1990's under DeForrest's leadership, it continues to develop and market new products. Among its latest are the HIT-11, HIT-12, HIT-13 and the HIT-20—all tools or jigs designed to make the locksmith's workday, if not perfect, then at least a little easier. In fact, some door manufacturers have started using the HIT series to ensure standardization on all their manufactured doors—quite a compliment to the HIT series' durability and accuracy. The lock types and manufacturers the HIT series covers includes: Yale, Medeco, U.S. Lock, Corbin, Russwin, Schlage, Assa, Arrow, Omnilock, Sargent, S. Parker, Marks USA, and other cylindrical or lever locks.

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Marks U.S.A.

George Marks, President, formed G. Marks Hardware, Inc. in 1977 so as to serve a growing demand for a quality engineered mortise lock. Today the company enjoys having a reputation of being a manufacturer who services its customers as well as the industry; holding both in high regard.

The product line has grown to include cylindrical and tubular locks in addition to mortise. Designs vary so as to accommodate commercial and residential applications. The introduction of the "Survivor" key-in-lever 190 series has taken off dramatically. The sales are skyrocketing and it is probably the

hottest new product in years.

Marks Custom Lockset Division continues to grow providing products that require specific applications that are not the norm. Locksets have been developed for Chicago Housing Authority, New York City Board of Education, Los Angeles Unified School District; just to name a few.

Marks products are sold through wholesale distributors catering to locksmiths, contractors, door manufacturers, etc. They are represented by direct factory sales personnel and independent sales representative.

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Schlage Lock Company

The Schlage Lock Company, was established in 1925 by Walter Schlage, a German immigrant and creator of the modern key-in-knob lock. Today, Schlage is one of the world's best-known lock manufacturers, producing and marketing locks for the commercial, home building and do-it-yourself markets worldwide. The San Francisco-headquartered company leads the commercial and mid-to-high end residential lock markets in the United States. Schlage is a leader in new product introductions.

Schlage employs 2,700 people worldwide, 750 of them in the Bay Area, and maintains manufacturing facilities in Security, Colorado; Tecate, Mexico; and San Francisco. The company is organized around three primary business units—commercial, retail, and residential—which correspond to the major segments of the domestic lockset market.

Schlage is owned by New Jersey-based, worldwide equipment manufacturer, Ingersoll-Rand.

Schlage's primary marketplace strengths are its products' widely acknowledged quality of design, materials, manufacturing and reliability. Recognized for its distinctive, stepped-shape key, Schlage is known in the industry for the ease and speed with which it does business with building owners, security manager, architects, locksmiths, contractors, facility managers and specifiers—and for its post-sale support.

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Lockmasters has a 44 year
history of training
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Securitron

Since 1971, Securitron Magnalock Corp. has been committed to providing the highest quality products to the security/access control industry backed by unparalleled customer service. As Securitron has grown, so has our needs to maintain our commitments to the industry. To better serve our customers, we conducted an exhaustive search for a location for our new manufacturing and corporate office facilities.

This month, construction will be

completed for a 40,000 square foot facility on a three plus acre site overlooking the snow capped Sierra Nevada mountains in Reno/Sparks, Nevada. Our facilities will double our current capacity and incorporate our executive offices, manufacturing and distribution facilities under one roof instead of several smaller facilities in our present location in California.

Every foot of space has been carefully planned from expansive warehouse and manufacturing facilities to our executive/customer service office facilities. This new facility will allow us to provide the highest quality manufacturing and fastest delivery times in the industry with sales and service second to none. With expansion capability to 68,000 square feet, our facility will allow us to meet the increasing demands of the rapidly changing security industry.

With a commitment from over 60% of the current employees of Securitron and with no loss of key personnel, the Securitron team is hard at work to make the transition from California as smooth as possible.

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Silca Keys U.S.A., Inc.

Silca Keys U.S.A., Inc. is the newest division of the Silca worldwide companies whose history dates back to it's beginnings in 1770. The Silca U.S.A. factory and distribution area is now in its fifth year of operation in the United States and offers a wide range of high quality keys and key machines to the Locksmith industry. The number of individual key styles available to the industry have now surpassed 1700 references. Silca offers their Image, original-like line, the Pronto line which features the simple reference numbers, the standard line featuring the hard to find and sectional series keys, the most complete line of rubber headed keys available and Neuter Bow keys plus two lines of Personalized Neuter Bow keys.

Quality and service are the main strengths of Silca's worldwide operations. Production specifications of keys are as close as possible to original tolerances to assure correct fit and duplication. Silca offers American Locksmiths an alternative source for their quality product needs.

Silca is also famous for the highest quality key machines and related equipment worldwide. The Club and

Club Jr. machines which duplicate the High Security Laser/Sidewinder and dimple keys, set the standard for other machines to follow. No other machine in this field offers the wide range of capabilities nor the fine tolerances to which this machine is constructed which is so important for proper duplication of High Security keys. The Silca Bravo U.S.A. machine is said to be the finest quality duplicator in the word with no other machine offering all of it's features and safety benefits. The durability of all Silca machines is unparalleled in the industry.

The manufacturing facility is constantly expanding production and is currently in the process of adding injection molding equipment for rubber headed keys. Plans are to offer the complete range of keys required for the United States market when the expansion is complete.

Contact your distributor for information and pricing.

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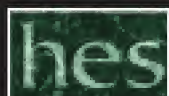
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by
Dale Libby

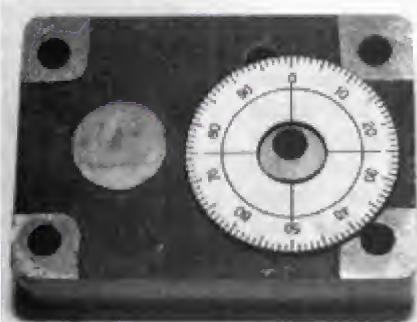
THE DIEBOLD LUG DOOR

"To make it short, attack the lock and not the safe. This procedure works well for me."

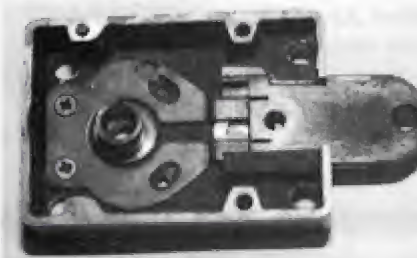
I have been asked by several people why I have not written a safe opening book. I reply that the book I would write would be a very short volume. I propose to attack the safe lock and not the builder of the safe. When we, as locksmiths, go out to open a house, we do not have to know the name of the builder, or even the lock on the door. We go out and open the house with the best methods we can.

In these days of standardization of combination locks, there are perhaps only a dozen locks that locksmiths have to work with on "modern" day safes. Antique safes are a little different, but with an acute understanding of modern combination locks, the old ones will fall. To make it short, attack the lock and not the safe. This procedure works well for me.

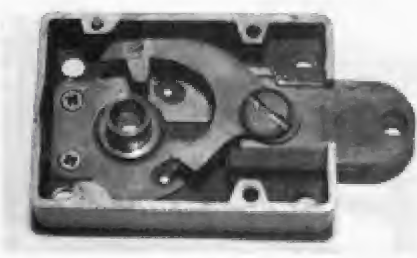
I was called on to open a Diebold Lug door burglary chest in an estate matter. I went up and viewed the safe. There was no change index on the dial ring, but that only meant that the lock could be hand change, rather than a key change lock. The dial turned too hard to try and manipulate, so I decided to drill.



1. The Diebold 900 series lock with magnetic dial ring. This is what the lock would look like if we were allowed to see through the safe door.



2. Inside the lock you can see the drill hole located at 1 o'clock about 1" from the center post.



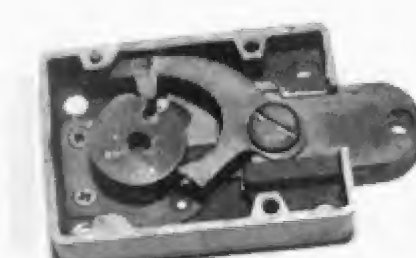
3. Locking lever in place. Drilling through the relocker spring prevented the kept the lever from falling into place.



4. The relocker spring and the bottom of the combination bolt.



5. Back of the lock shows a "Zero Change" placement of a change key hole. The pointer shows the position for an offset key change combination lock.



6. Inside of the lock with the drive cam in position.

Photograph one shows an x-ray view of the lock. I have attached a magnetic numbered ring (made by LeRoy E d e n b u r n Enterprises, more on his tools in another article) to show where I drilled. The center of the drilled hole is located at #97.

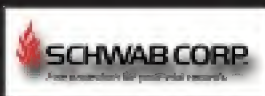
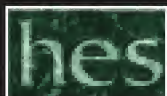
Having drilled these locks before, I was prepared for a little problem that these locks present when drilling open at the drop in position. In photograph two my drilled hole can be seen at one o'clock, about 1" from the center post. It is next to a cut out in the relocking trigger spring. What you cannot see is the raised edge on the spring that I caused to appear when drilling carefully through it.

Photograph three shows the locking lever installed. When I drilled

through this spring and deformed it, the edge of my drilled hole caught the end the lever fence, and kept it from falling into the gates of the wheels after they all had been lined properly.

If you are not aware of this, you might be somewhat puzzled. It was easy to rectify, however. I inserted a small probe into the lock and pulled the spring outward toward me to take

Since I was not familiar with this particular round lug door, I looked in my Safeman's Guide for a peek. It was not listed there. To determine the type of lock I just turned the dial. There was no suspicious click at 100 on the dial, so correctly assumed that the lock in question was a Diebold 900 series lock that was essentially identical to a S&G 6700 series combination lock.



pressure off the end of the lever fence so that it would move into the gates. I then turned the dial spindle to the right and the lock opened.

Photograph four shows an exploded view of the bolt and spring. If the wheel pack is punched, this spring will bend up and block the movement of the combination lock bolt. There is a small ledge on the underside of the bolt that the spring blocks when it is forced up. A unique type functional relocker that has caused me problems on other occasions

Photograph five shows the back of the lock with the #912. I have put a probe on the approximate position for a standard offset key change lock. The position on this Diebold cover of the key change hole indicated a "zero change" position. Photograph six shows the inside of the lock with the drive cam in position. Note the extra "leg" on the locking lever. When the change key is inserted into the hole and turned, it raises the lever above the wheel pack while the combination is being changed.

This has to be done in order for the opening index to also act as the changing index in these type of "zero change" locks. on older vault locks by Diebold, I have seen a geared lever arrangement where after inserting and turning the change key, the lever which is attached to the back cover of the combination lock raises the locking lever out of the way while the change key is inserted. Same theory, different technology, same results.

I did not have to repair the safe, because the children just wanted the extensive coin collection contained therein. I added this lock to my collection. Open and Prosper! Yes, I know about plasma torches, burning bars, side drilling, and other esoteric ways to get around the Relsom, but every once in a while, it is nice to humble yourself before a great piece of workmanship like a Mosler TR1L30 Lug Door. That is, if you have not quoted a flat rate price. Thanks for all your comments! I appreciate it!



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by

Jake Jakubowski

PLAY IT...AGAIN!

"I find it difficult to pass up money making opportunities that will allow me to indulge myself."

If you were to take a good look at my photograph at the top, left hand, corner of this page; you would probably be able to guess that I am of sufficient size to preclude the fact that I miss very many meals. You would be right! Since I have an aversion to not eating, and I tend to enjoy taking my wife, Christie, out to eat on a regular basis, I find it difficult to pass up money making opportunities that will allow me to indulge in both of the foregoing pursuits.

If you're thinking that I'm about ready to spring another one of my "alternative," and "non-traditional" money making opportunities on you, you'd be right again. Actually, what I am going to propose is simply a little "reverse English" on an earlier idea (see "Hang a New Door", June, 1992

issue of *The National Locksmith*).

There's a distribution warehouse that I do work for on a regular basis, and over the last few years I've kept them informed of various problems (regarding locks, and doors, etc.) that they might encounter with OSHA, Life Safety Codes, and now, the ADA. As a result, management at that facility tends to call me for a variety of "corrective" work. Everything from installing and repairing exit alarms, to fixing sagging doors.

Recently, my contact at the warehouse called and asked me to come over to see if I could help them with a "problem" they had. During an earlier trip to the center, I had pointed out that one of their exterior doors opened in the wrong direction, and would, no doubt, need to be "fixed." In

the time between that visit and their call to me, they had undergone an OSHA inspection and were told that the door needed to be an "outswing" rather than "inswing." (See *photograph 1*.)

"Bucky" wanted to know if I could install a new door and frame, that would "open out," and how long it would take to get the job done. After looking over the situation, I told Bucky that I didn't think a new door and frame were necessary. I told him that if his crew could weld a 1/4" x 2" "shim" (see *photograph 2*) to the outside of the door frame, I could use the same door, and frame, by just re-hanging the door on the outside. That is, I would make it a left-hand reverse (out swinging), rather than a left-hand (inswinging). Time-wise, I told him

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1. The inswinging door that OSHA said needed changing.

that it would take me a couple of days to get the hinge (a Roton #780-210 Continuous Hinge, *see photographs #6 and #10*), and that the change over would take "about 3 or 4 hours" to complete.



2. To accommodate the 1-3/4" thickness of the door, this 1/4" shim was added to the exterior frame face.

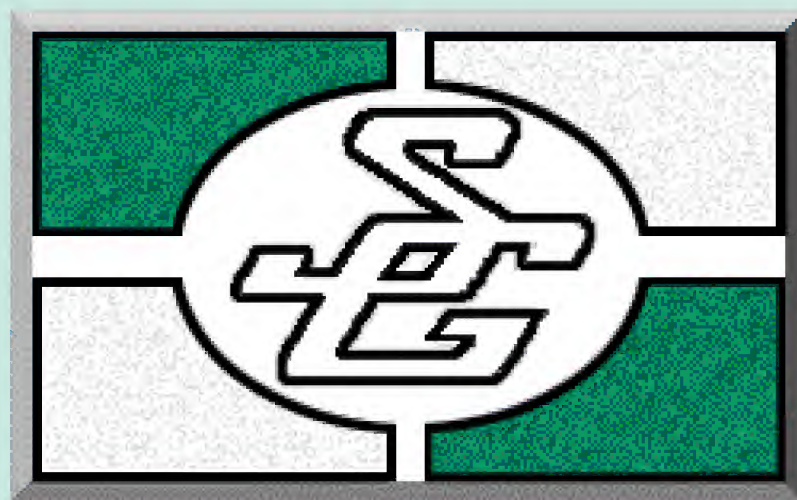
I also pointed out that since the door was going to be on outswing doors and they wanted a "panic bar" on the door, that the door would require a closer. (*See photograph 3.*) And, rather than a locking knob on



3. Not wanting to miss any opportunities we added a closer to the job.

the outside, they might as well install a lever entry handle to comply with the ADA (that's called suggestive, or add-on selling. A simple technique to increase your total invoice amount, which means more shekels in your pocket!) Whipping out my calculator, I gave Bucky a "guestimate" of between "x" and "x"; and he gave me a "Go!"

Because the door frame is generally about 1/4" narrower on the "outside" (or the opposite "face" of the hinge, and latch side of the door) than it is on the "inside," it was necessary to have a band of metal welded to the "outside" of the door frame (*again, see photograph 2*) to match the 1-3/4" thickness of the door.



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Because there was not enough room to weld the shim solidly to the "reveal" side of the frame (i.e., the side closest to the brickwork *as shown in photograph 2*), I asked Bucky to have his people "notch" the shim on that side, weld the notches in, and grind the welds off flush. Then, by through bolting (*see photograph 4*) the stress points of the Roton continuous



4. The sex bolts mounted at the stress points.

hinge (top, middle and bottom), we'd be sure of a stable frame and hinge.

Now comes the fun part.

My friend (and fellow locksmith) Danny Campbell, again answered my call for a strong back, and an extra pair of hands. (I've decided that this type of work is much easier with a helper.) At any rate, we removed the screws, then the hinges that held the door in place, and filled the cut-outs in the frame with hinge plate fillers. We then positioned the hinge, marked our drill points—Roton even provides transfer punches to mark your drill points with each hinge—on the frame, and drilled our holes.

The top two holes, the middle hole, and the bottom two holes were all through drilled to accept sex bolts (*see photograph 5*), which I thought would strengthen the welded shim, and hinge. On the rest of the holes we used Molly Jack Nuts and 1/4" X 20 screws. (See "A Not So Epic Sequel", *The National Locksmith*, November, 1992.)

Every bolt that we used to bolt the



5. Marking and drilling the frame for the hinge mounting bolts.

hinge to the frame (*see photograph 6*) or the hinge to the door, was liberally coated with Locktite to help insure against the bolts "backing out" from the vibration caused by normal door action.

Danny, and I, then placed the door



6. Each bolt used on the hinge and door was coated with Locktite.

in position, closed the hinge over the door, and marked our drill points for the six bolts that would hold the door to the hinge.

To help stabilize the door while we were drilling our 3/8" holes, I



7. Using this aluminum bar to raise the strike off of the door frame, allowed us to use the 2-3/4" door prep to mount the exit device.

fastened the hinge to the door with #10, self drilling, "TEC" screws. With the hinge securely bolted to the door, we checked the door for proper operation.

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The standard 2-3/4" back set for the old hardware was too far back to accept the panic hardware (without modification) that I ordered for the door. I did not want to put a plate over the hole and then cut another hole. So, calling upon that proud, problem solving, blood that runs rampant through my veins; I used a 3/8" x 12" aluminum spacer about four inches long to bring the strike out far enough to engage the latch. (See photograph 7.)

That tricky little maneuver allowed us to utilize the existing 2-3/4" backset preparation for the entry lever set. After installing the lever handle, panic bar, and closer, we then checked to make sure everything functioned properly. (See photographs 8 and 9.)



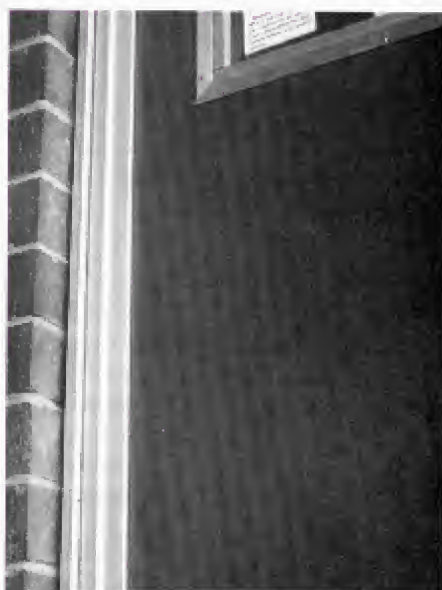
8. The mounted exit device.



9. The lever trim to meet ADA standards.

Photograph 10, shows the hinge side of the door after completion. The hinge has the security hinge cover in place which not only helps to prevent someone from removing the bolts holding the hinge to the door, it "dresses" the hinge out very nicely.

Where do you find this type of "alternative" work? In the very businesses that you are servicing now. As you rekey or install new locksets,



10. The door and hinge installed.

check out the door that you are working on. Does the closer function properly? Is the door sagging? Does the door open in the proper direction? Should the door have panic hardware on it? Does it need a lever set to comply with the new ADA requirements? Does the existing hardware comply with the Life Safety Codes for your locality?

If any operational problems exist with the door or door frame, tell your customer about them and let that customer know you can fix it. Sure,

these jobs are "non-traditional" in the strictest sense of the word "locksmithing." But I'll tell you this, friends and neighbors...so is the amount of money you can earn doing this type of work.

Suffice it to say, Danny or I would not have had sufficient time to open enough locked cars during the entire day to equal what this job paid us!

Of course, if you are earning enough money doing rekeys, opening locked cars and homes, repairing and installing locks, setting up master key systems, and cutting duplicate keys; then you don't need to consider "alternatives."

On the other hand, if you have some "slack" periods, and your income is not what you would like it to be ... jobs like this can definitely fatten your wallet. Another benefit of this kind of work is that it makes "regular" customers out of occasional customers.

From my personal standpoint, the best part of this particular job was when I gave Bucky my bill. He gave me my money. Then, I sent Danny home with his share. And me? I went home, got Christie, and took her out to one of our favorite restaurants!



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 by
Sean DeForrest

RETAIL MERCHANDISING

"When customers walk into the shop, more than anything, they want good security for a fair price."

Today, mega retailers such as Home Depot have grabbed an astonishing share of the hardware market, including lockset sales. These highly efficient well-merchandised stores are not going away and, in fact, are the most recent examples of merchandising trends pioneered by mass merchants such as Wal-Mart. The mega merchandiser's strategy is to be well-stocked with a limited line of products and then sell them at very attractive prices. Some of this "everyday low price" strategy is real and some of it is a carefully created image in the mind of the consumer. Nevertheless, the mega merchandiser is successful and this type of retail outlet is here to stay for a while.

Despite their success, there are several weaknesses in which the mega merchandiser philosophy can be exploited. The most glaring is they do not provide home security; they sell merchandise. Mega merchandisers are not able to provide a range of security alternatives nor expertise that gives the consumer a feeling that he will be secure at home. The locksmith, with his range of locks and experience, can do just that if he learns how. He can assure the consumer not only that he is buying the right lock, but he can also assure him it will be installed right.

The Customers View and How To Win

So what do customers want when they walk into the locksmith shop? More than anything, they want security at a fair price. And, even if the locksmith shows them good locks at fair prices, it does not mean that customers will not haggle. Haggling about prices is an increasing buyer trend in these hard times. Many times customers haggle so that they can allay their fears about paying too much, or buying the wrong product, or buying it from the wrong place. So when customers start talking about price, recognize that there may be a whole host of factors on their minds,

including getting good value. Do not get defensive about someone else having a lower price, or just shrug it off and not respond.

To counter the invasion of mega retailers, the locksmith will have to become a sharper merchandiser of both his locks and his service. Nothing else will succeed. Merchandising is nothing to be afraid of. It means making a crisp, clean presentation of your products and your prices to your customers. It means presenting at least one product with a competitive price (a "fighting" brand) and moving the customer up from there. It means knowing how to allay customer fears and sell them products and services that they want.

The first key ingredient to effective merchandising is a well-designed price list. The best retail stores are masters of price display or price tags for their merchandise. The numbers are large, easy to read, and typed consistently. Walk into a Target store or even most Wal-Mart stores and you will notice that these merchandisers have thought out the presentation of the prices and their products in some detail.

The same challenge rests with the locksmith. The buyer walking into your store also shops in these places for other items, not just locks. They want assurance that prices are fair. So prices in small type, done in inconsistent fonts and sizes, cause problems. Worse is displaying merchandise with no prices shown on them at all. Customers are not shopping with a blank check. They want a good lock at a good price. Both should be easily seen as soon as they walk in.

A well designed 8-1/2" x 11" price list sheet (or a series of price lists) will also help greatly. It gives the locksmith a chance to present his best products first, to show the cost of his services, and even offer a special promotional package.

Why is it important to have these things? It is very important that

customers have some tangible evidence that the locksmith is fair — not just making up prices. Remember the greatest fear buyers have — paying more than they have to! A preprinted price list takes away some of these fears.

A good price list starts with the most popularly sold products at the top. This gives the locksmith an opportunity to "step customers up" from popular or fighting brands to higher-priced and higher-profit locks. You can also talk about which are your favorites professionally and give supporting reasons why. The price list then becomes a means for the locksmith and the customer to talk to each other. The locksmith can talk about which locks are heavier, and which manufacturers have better reputations and have been in the business longer. Much better than just empty words flying across the counter!

What else should be in a good preprinted price list? After listing a few (not all) of the most popular locks, there should be a section for service charges, installing locks, and also any guarantees or free follow-up calls.

Perhaps the most important thing you can do in the price list is to create a pre-packaged bundle of locks and installation services for the customer. The bundle of hardware (locks) and services (installation) is one area of differentiation that cannot be matched by mega retailers. The locksmith is the expert.

Others who compete against mega retailers like Home Depot have resorted to bundling product and service to win back business. Independent lumber yards, after losing cash-and-carry lumber business, started bundling service and payment terms to regain contractors and home builders. They instituted rooftop lumber loading and delivery at the construction site — a service Home Depot could not match. They also started extending payment terms

to contractors — an area that others could match if they chose to. DuPont's Corian, a leading table top product for kitchen and bath counters, instituted a ten-year warranty on both product and installation. Their tough-wearing, long-lasting counter tops are now the standard, in part because no one else guarantees installation at all; yet they do it for a ten year period!

The locksmith may choose to guarantee installation also. He must, however, be creative. For example, he should be able to put together a multiple lock residential or commercial package and pick an attractive price point, such as \$150 for three residential locks installed, including the service call itself. The bundled price should be less than the sum of the separate prices shown on the price list for the locks and the installation services separately. Do not be afraid to bundle in extra keys. Again, the locksmith can show more flexibility than the mega retailers. Suggest to the customer that they get all of their keys at one time. A spare set for themselves, a spare set for their safety deposit box, and a spare set for relatives in case of emergency.

Three or four sets, not just two keys — all included in the bundle.

People buy bundles for one primary reason: to get everything taken care of at once. No need to keep coming back to get extra keys two or three weeks later. No need to worry about whether they installed the locks properly themselves, or what happens if they have made a mistake. All of these values and fears can be addressed by designing a creative product and service package for customers.

Any other tips? Should the locksmith be like the large department stores and offer big sales — such as one-day sales? Although I strongly recommend becoming sharper at merchandising, I do not recommend that you take things to extreme. Avoid one-day sales. They are losing their favor with buyers anyway! No sign in the window saying 40% off today only — it raises the question to the customer, what if I happen to walk in the wrong day? Am I paying 40% too much?

In addition, locksmiths should avoid the trickle down approach to pricing: starting with their most expensive locks and then moving

down to the least expensive ones. You can frighten customers away with this approach. Also, avoid starting with high installation charges and all of a sudden becoming flexible once the customer is walking out the door. It raises doubts about whether a consumer is just being "gamed" about prices in the first place.

Price Objectives

Often, despite your best attempts at selling your value-added services, consumers really are more focused on getting the right price rather than the correct set of products and services. They budget improvements based on what they think it should cost. The budget is fixed arbitrarily. If you sense that your customer is overly concerned with the price point itself, then try another option...keep the price point and offer them a fighting brand. A fighting brand is a lock line not carried by the mega merchandiser so the consumer cannot easily compare prices. Tell them, however, that the fighting brand's low price alternative is not your professional recommendation. You believe that security and peace of mind is not

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by

Rick Segerstrom

DETENTION LOCK CLASSIFICATION

"Detention locks are classified in three distinct categories: low, medium and high security."

In my first article I spoke about the prevailing reasons for and the necessity of getting training before you attempt to market to the jail and prison industry. You will probably get tired of my constant harping on two subjects, training and professionalism, but these will make or break you in any business.

Detention locks are generally classified in three distinct categories, low, medium, and high security. The low security locks are used mostly on individual cell doors. These locks can be activated by using a key, or by remote activation at a control panel. The controls for these locks are usually located close to the cells themselves within a pod or group of cells controlled by a single or double officer setup. These officers can control the individual cell or a group of cells, or the entire pod of cells from this control panel, but usually cannot control the main security doors leading into the pod itself or the hallways attached to the entrances.

In some cases, prisoners are issued individual keys so as to give the flexibility of egress and ingress to the prisoners themselves. In most cases these low security locksets are actuated by the standard mortise cylinders with which every locksmith is familiar. While these cylinders may be considered high security to for commercial or residential use, in the detention field these are at the low security end of the spectrum. While I have only encountered Medeco on these individual cells, I have heard of such brands as ASSA and Abloy being integrated into other facilities.

The locks themselves differ in several ways. First, the lock unit is not mounted in the door, rather it is mounted into the door frame with the receiver mounted into the door. This type of mounting facilitates the running of wiring for all of the hardware in the facility. If the locksets are mounted into the door it would be necessary to use transfer devices (electric hinges, etc.) and run

wiring through the door to provide power to the lock.

Aside from making the installation harder, having the hardware mounted in the door leaves room for tampering by the inmate population. Keep in mind that all these prisoners have is time, time to engineer every conceivable bypass or sabotage technique that can be done to these locksets. Therefore, it is necessary to engineer the locks in such a manner as not to make them easily accessible with standard tools.

One of the things you will appreciate about detention locks is the absolute simplicity design. This will become clearer as we learn more about the locks themselves. The locks while being actuated by key as well as electricity can also be actuated by air. Several of the newest innovations being marketed by the detention industry are pneumatic control locksets. These locks are identical in design and function, but instead of solenoids as actuators, pneumatic pistons and diaphragms do the job. I have yet to make repairs to a facility so equipped, but am looking forward to my first encounter.

The second series of locks are the medium security locks. These are used in some exterior door applications, although usually not on direct inmate processing doors. These locks are also actuated by either key or control panel command, using the Mogul type cylinder for the key operation.

A Mogul Cylinder is similar to the mortise cylinder we all know and love, but measures about 3" in diameter. The keys for these cylinders are about four times the usual size of the keys we normally use, with every manufacturer having a different keyway and head design. Each manufacturer also employs sectional keyways. Sound familiar?

Because the cut depths are different for each company the pinning kits are not universal, and pinning kits must be purchased from each

manufacturer. A word to the wise: these kits are expensive, I should say *very* expensive, so don't lay out this kind of money until you are actually called upon to do a lot of repinning. You can buy individual pins from the factories for those small jobs.

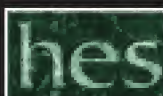
One of the most distinct differences of Mogul cylinders besides their size, is the use of a ball bearing in the bottom of the pinning holes for riding against the key. The top pins are flat on both ends, while one end of the bottom pins are concave for riding smoothly on the ball bearing. The Mogul cylinder also incorporates the use of a master ring to aid in masterkeying large facilities.

Maximum security locks include the paracentric keys or jailers keys as they have become known. These locks are normally found on sliding doors and gates found in the maximum security areas, as well as on exterior doors, hallways, passage ways, and anywhere else that prisoners may be in direct contact with the outside. These locks are found in every facility from the local lockup, to the federal penitentiaries. With proper maintenance these locks should last the lifetime of that facility.

When and if these locks should break, the facility will want the repairs done immediately if not sooner. These locks are usually remotely controlled from a central control room. The key function is most often an override function for manual release in case of remote function failure.

Many older facilities use individual paracentric type paraceon individual cell doors. These must be opened manually each time the door is opened. Aptly described as gorilla proof, some zoos actually use these type locks on the cages of their gorilla exhibits. The paracentric key and the inner mechanisms are similar to safety deposit box locks as they are the levered type of lockset. Rekeying being also similar, you must order the keys as well as the levers from the

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factory to rekey any of these locks.

A brief word about ordering from the factories. First and foremost, the factories are busy trying to build locks for new facilities across the entire world. Anytime you order from the factories, anticipate a 4 to 6 week wait for your order to be processed and shipped. This drives me up a wall, but the jails are pretty well accustomed to this.

It's not that the factories don't care about you or the repair segment of the industry, but they are geared to certain production sequences and your order must proceed the same way an order for new locks proceeds. The factories I have ordered from have been quite helpful and receptive to the repair segment of the business, and have had orders processed as fast as one week. This is the exception, however, and not the rule. Anticipate the extra waiting period.

Also, factories have certain keyways and certain key codes dedicated to certain geographic areas. You must provide facility locations and the location of each lock that is to be rekeyed to the factory. Each manufacturer keeps a very complete database on each and every facility that uses their hardware. This database is essential for security reasons. Therefore you cannot purchase extra leversets, for example, for a facility in Georgia, and install them in a facility in Oregon.

To order equipment you must complete paperwork describing which facility each lock code was installed in and where. This paperwork accompanies each lock and leverset you will receive. You will find that the paperwork associated with detention lock servicing is very informative and helpful. If such exact records were kept of each of our regular locksmith customers you would be surprised at the man hour savings you could realize.

Something else you will be called upon to do is order extra cut keys for a facility at some time or another. This is accomplished in the same manner as ordering parts. Call the factory, talk with your sales rep and he will help you with whatever facility needs the keys. Also, I suggest that you have the keys drop shipped to the facility directly from the factory. This relieves your liability for receiving the keys and the associated liability of loss of these keys.

Remember the liability of working

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SHOP TALK

Helpful questions and answers

Shop Talk answers readers questions on any locksmith related topic. Only letters judged to be of general interest will be published. We regret that we cannot answer individual letters. Because of the volume of mail, only those questions answered in the magazine will receive answers. Send your questions to Shop Talk, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

Q: I have not been able to secure code information on this Yale padlock - code number 3549. It has a steel body with brass shackle. Enclosed is a picture of the lock. (See photograph I.). Verne Lace, NY.



1. The Yale 805 "club" or "clover."

A: The lock you have there, Verne, is the Yale 805, push key, pin tumbler padlock. Pictures and background information on this lock can be found on page 142 of *The National Locksmith Guide to: Antique Padlocks*. The body is made of iron and the shackle is made of brass, and dates back from 1897 to 1925. The "Yale" logo appears on the front of the lock while the three hole key head appears on the reverse side and has given the lock the name "Club" or "Clover."

The key is a flat steel (.040") key. The lock is pin tumbler. To operate or open, a key can be made by code or

shim and disassemble the lock.

Code numbers, such as yours, are almost always found on the bottom of the lock.

According to *The National Locksmith Padlock Code Book* this lock can be tricky when it comes to fitting a key, but you can try the following bitting - 53466. Use Continental Code Card #57.

Q: Can you please clear up the differences in the pinning for locks on various years and model Fords that use the Ford 10 Cut system? Steve Stegle, IL.

A: You bet, Steve. This has been a pretty confusing system for many locksmiths. But there's nothing like change, as they say. Currently, there are only four variations for tumbler placement on the Ford 10 Cut system. The first and most common was introduced in the 1984-1/2 T-Bird and Cougar, and quickly followed to the large body Ford cars and trucks. In this version, the door locks had tumblers 1 through 6 and the ignition had tumblers 5 through 10. The tumblers in positions 5 and 6 were common to both door and ignition. The glovebox and trunk locks used the standard Ford 5 pin secondary lock and key.

The 1991 Escort and Tracer brought a change to the ignition and door lock style, as well as the tumbler placement in each lock. Although the key has cuts in positions 1, 2 and 3, none of the locks contain tumblers in these positions. The ignition has tumblers in positions 5 through 10, the doors and hatch have tumblers in positions 4 through 9.

In 1992 a slight modification was made to the Escort and Tracer version of 1991, and was added to the Explorer. As with the earlier version none of the locks have tumblers in positions 1 through 3. The ignition

still has tumblers in positions 5 through 10. In the doors and hatch, however, the tumbler was removed from the 9 position. This left the doors and hatch with tumblers in positions 4 through 8.

With the introduction of the 1993 Villager (the new van built in conjunction with Nissan) the tumbler placement had another slight modification. Like the 1992 Escort, the ignition holds tumblers 5 through 10, and the doors tumblers 4 through 8. Added to this model (and Nissan's Quest) was a glovebox with tumblers in positions 8 and 10.

Listing the years and models for each change you find:

1984-1/2 T-Bird and Cougar, followed in later years by the large body Fords.

1991 Escort and Tracer.

1992 Escort, Tracer and Explorer.

1993 Villager and Nissan Quest.

For a complete breakdown on tumbler placement and progression for each vehicle, see the charts submitted by Technitip winner Jay Christie, on page 12 of the May, 1993 issue of *The National Locksmith*.

Q: What is the easiest way to remove a broken key from the ignition of a 1985 Nissan Sentra? John Rice, Kingston, NY

A: While it depends on how much of the key has broken off and how deep it is in the keyway, I have always had a great deal of success with spiral key pullers. Gently turn or drill one of these in next to a key groove using a vise-grip. Pull the key out. If tumblers are dropping in the way of the broken piece it is first necessary to clear them as the key is pulled. These pullers come in two diameters, .040" and .050", and are available through most distributors.

BUSINESS BRIEFS

News from the Locksmithing Industry

Industry Interview...

LARRY O'TOOLE



Who graduated with a Masters in Finance in 1988, likes tennis and basketball and is an avid piano player?

Larry O'Toole Corbin Russwin's Director of Marketing.

Larry has been working in door hardware and security for more than 10 years now. Starting in 1983 Larry worked the Minneapolis, Minnesota region for Russwin sales.

In 1986 with just three years under his belt, Larry took over as Sales Manager for the Corbin and Russwin Electronic Security Products. And, in 1988, became the Internal Marketing Manager.

Here Larry established distribution channels and developed the marketing programs for Corbin and Russwin.

In 1991 he took charge as the U.S. Marketing Manager where he worked on product and program development.

Still the leader, Larry became Director of Marketing in 1993. Here he became instrumental in and responsible for the Corbin/Russwin consolidation. Beyond the name and logo change involved with the merge, Larry coordinated the moving and changing of the equipment and

product lines to reflect the joint company, as well as creating, changing and updating all support materials.

With respect to hardware, Larry sees the new codes and laws as having quite an impact on today's hardware.

"The ADA codes and the Fire and Life Safety Codes have had quite an influence on today's hardware," he said.

When asked what our industry has to look forward to Larry sees electronics taking a much stronger role in security products and door hardware.

"Heading into the year 2000 about 50 percent of what the locksmith is going to deal with is going to be electronic," he said.

"Electronics will be playing a definite role in new products and tools.

"Look at the mechanic, for example, and the changes he's faced with today."

"In order for the locksmith to grow and exist in the future, he is going to have to be continually educated," Larry adds.

"The locksmith is going to evolve to a Door Hardware Service Technician."

If there are any changes that the locksmith is going to have to make for the future, Larry sees that locksmith must take on a larger view of his responsibility.

"The locksmith must position their image as a person who can solve problems," said Larry, "the customer must see the locksmith as someone to place confidence in."

Larry currently spends much of his time coordinating and participating in free training seminars offered to locks.

The seminars are sponsored through Corbin Russwin distributors, and cover the installation and servicing of Corbin Russwin equipment and hardware.

Industry News...

At the ALOA show in July, locksmith Russ Courtney of Iowa, won Silca's drawing for a free Bravo USA. The winning ticket was drawn by Editor Marc Goldberg. Don



From left to right are: Don Mears, Russ Courtney, and General Manager Dave Powell.

Mears from Irvine, CA was recently appointed Western Regional Sales Manager. Silca's Twinsburg, OH factory has been rapidly expanding, manufacturing a wide range of key blanks, made in the USA. Silca also manufactures a high quality line of key machines...

Thomas Smith has been promoted to product manager, commercial/institutional, for the padlock division at Master Lock Company. Smith will be responsible for the padlock product line sold to commercial, industrial and institutional users through distribution channels that include locksmiths, industrial wholesalers, hardware wholesalers, and select supply and locker manufacturers. ...

Kaba High Security Locks is pleased to announce the promotion of Thomas DiVito to the position of Chief Executive Officer. Tom most recently held the position of Vice President, Manufacturing and brings to his new job experience in total quality management as well as finance...

Kwikset Corporation recently became a Foundation Member of the California Police Athletic Federation in support of the World Police and Fire Games and the California Police Summer Games, the second and third largest amateur athletic competitions in the world. The World Police and Fire Games, held every two years, is an international event attracting competitors from around the world...

Kwikset was also recently awarded four Drummer Awards by Building Supply Home Center magazine. For the past 31 years, Building Supply Home Center magazine has sponsored the Drummer Awards as a way to recognize companies who strive for excellence in their merchandising and advertising in support of the retailer...

Mas-Hamilton Group received R&D Magazine's 1993 R&D 100 Award for its development of the Model X-07 self-powered electronic



Executives of Mas-Hamilton (from left): J.D. Hamilton, VP-Marketing; H.L. Brooks, Project Engineer; and G.L. Dawson, President.

combination lock. Selected by more than 75 scientific experts in a variety of disciplines and the magazine's editors, the award recognizes the Mas-Hamilton X-07 lock as one of the years most technologically significant new products...

Arthur P. Steele Corporation, A.D.B.A. ABUS Lock Company USA has been purchased by RTJ Investors Limited Partnership, a Delaware Corporation, effective June 30, 1993. ABUS will be led by the management team of Thomas R. Laitala and Jerome E. Laitala. Sam Crissman and Arthur Steffenberg, founders of ABUS will continue to function as an integral part of the company...

NT Monarch Hardware, a Newman Tonks company, announced the appointment of **Mike W. Dawson**, Western Regional Manager. Mr. Dawson brings 12 years of hardware industry experience in sales management and field representation to his new position...



Mike W. Dawson

Thomas C. Downey has been appointed Vice president of Sales for **Baldwin Hardware Corporation**. He will be responsible for all the company's domestic and international sales initiatives and its customer and technical service support programs...



Thomas C. Downey

Black & Decker Corporation announced that **Barbara L. Bowles** has been elected to the Corporation's Board of Directors and appointed to the Board's audit and pension committees. Ms. Bowles is President of The Kenwood Group, Inc., an equity advisory firm that she founded in 1989...

Allied Gary International is pleased to announce the addition of **Larry Robinson** as National Accounts Manager-Midwest. He will assume responsibility for all safe and cash controller sales in the midwestern region. Robinson comes to Allied Gary with several years experience in the cash controller industry...

The Louisiana-Mississippi Locksmith Association recently celebrated its 25th anniversary with a convention in Baton Rouge, LA...



Included in the grand opening ribbon cutting are (left to right): Van Ingram, Director of Sales Holiday Inn, Breck Camp, CML S.E.V.P. ALOA, Henry Printz, CML President ALOA, Bruce Tarbet, CML President LOU-MISS.

Monaco Lock Company, Inc. introduces its new toll free fax line: 800-845-Lock. As in the past, all their fax lines are open 24 hours a day so as to accommodate the different time zones. Please take advantage of the new line for any requests, orders, or quotes...

Maziuk & Co., Inc., wholesale distributors of Syracuse, NY, is celebrating the 70th Anniversary of singer Hank Williams' birth. Maziuk customers will be able to receive FREE commemorative Hank Williams US Postal Service 29c stamps. One free stamp will be issued with every \$10 purchase of selected sale merchandise...

Northeast Lock now offers an 800 fax number. Taking advantage of the leading edge in communications technology, Northeast Lock is offering their customers a toll-free method of faxing their orders, confirmations, specs, etc. by simply faxing (800) 524-2576...

BITS & PIECES

Informative Tidbits for the Security Industry

With the ALOA convention having just finished up in Chicago there are plenty of items to share with you.



by
Tom Seroogy

One of the larger items is the current direction of some of the larger manufacturers. Today, more and more of them are directing their eyes and efforts to the locksmith.

Corbin Russwin, for example, is offering a new Cylinder Manual that includes very detailed information on all aspects of Corbin Russwin keys and cylinders. Thorough descriptions of key specifications, key biting classes and depth systems are given, along with Masterkeying capacity for the different Corbin Russwin systems is given. Extensive information and illustrations are given on multiplex systems and the keyways involved. Pinning the varying types of cylinders including Interchangeable Core, Emhart High Security, and Master Ring cylinders.

Auto-Security Products is starting a new marketing program this month, designed to create new business for the locksmith. The first stage of this program is the introduction of Catalog 12-OEM-A cross reference guide of original part numbers, ASP part numbers, and applications for Asian vehicles.

This guide is designed to hand out to auto repair and body shop customers to promote the locksmith as a one stop shop which can supply a new lock at a competitive price and

rekey it to the original car key. The cover of this guide has room for an imprint of a locksmith's name and phone number, and there is no mention of ASP anywhere in the book. All ASP part numbers in the catalog are called "Locksmith Part Numbers."

ASP is also featuring advertisements in major auto repair and body shop trade magazines to promote "Professional Automotive Locksmiths" as the best source for all car lock requirements. All those responding to the ads will be sent a copy of Catalog 12-OEM-A with further details on the services a Professional Automotive Locksmith can provide.

To further assist the locksmith, ASP is in the process of setting up a referral system by which an automotive shop can be referred to locksmiths serving their area.

Schlage is celebrating the 70th Anniversary of the "A" series cylindrical knobset. Invented by German immigrant Walter Schlage, this lock has been a standard by design and endurance for much of the cylindrical hardware we use today.

Looking to increase visibility and enhance its image to the general public, Schlage has launched a new television advertising campaign presenting themselves as the "Doberman of locks."

The campaign is designed to raise the retail consumers awareness of Schlage products. How should this affect the locksmith?

When quoting on hardware, I've always found consumer identification

of a product to be a much better selling point than pricing. Raising the customer's awareness of Schlage brand locks should allow the locksmith an edge in selling better locks at a reasonable profit versus unloading the less expensive hardware just to make a sale.

Briggs and Stratton released the new 1994 GM ignition cylinder at ALOA. A booth was set up and locksmiths were allowed to service and keep the new locks free of charge.

The new lock is a 9 tumbler, sidebar lock, similar in pinning to the standard GM ignition cylinder.

Also released are the new code series for the 1994 GM lock. The key is a double sided, ten cut key using four depths. The code series contains 100,245 active bittings, and is expected to gradually replace current series of GM codes.

These codes are expected to be used on 750,000 GM vehicles in the first year of its release. *The National Locksmith* has published these codes in a volume of over 400 pages. See the ad on page 87.

All-Lock is now offering various locksmith tools to help the automotive locksmith. Equipment includes: a steering wheel puller, lock plate tool, door panel/trim pad remover, GM/AMC door and window handle clip remover, lock plate tool and tilt telescope adapter. For more information contact an All-Lock distributor.

LIGHTER SIDE

All Locked Up

"What do you have lined up for this morning?" I asked Don one morning at the shop.

"Oh, a couple of dead bolt installations and a lock on a metal gate," he replied.

"What sort of metal gate?"

"Mrs. Greenly got one of those heavy iron security gates from Mexico to go outside the front door of her house. She wants me to put a lock on it."

"Be sure she knows the hazards," I replied. Then a giggle escaped my lips.

"Now what?" Don asked.

"Oh, nothing. I was just thinking about what one of the locksmiths was telling us at ALOA, last summer. Remember the tale about the woman who was trapped by her security door?"

"I don't believe I heard that one."

"Sure you did. Don't you remember? The woman had a front door and a security door that were set a couple of feet apart. She had forgotten to tell her husband something as he was leaving for work, one day, and she came running out the front door in her nightgown to catch him before he drove away. The front door locked behind her. Then she discovered the security door was also locked. Naturally, she had no keys with her, so she had to stay there in her cage until someone could call her husband home to let her out."

Don sniggered at the mental image and said, "Although I doubt there would be enough space between her doors to create such a problem, I'll warn Mrs. Greenly of the possibilities." He laughed again. "I must have missed hearing that one."

"It came up following the tale about the guy who was trapped in a car trunk, remember?"

"I can't say that I do. Refresh my memory," Don replied.

"A big guy and a little guy were working together, burglarizing stores.



by
Sara Probasco

The big guy would break out a high window and boost the little guy in. Then the little guy would toss out the loot to the big guy, who stowed it in the trunk of their car. Only, this night, somebody heard them and called the cops. When the big guy saw the police coming, he ran for the car, but he realized he wouldn't have time to get away, so he jumped into the trunk and slammed it shut. The little guy was still tossing stuff out the window when the police arrived, unaware that his buddy was no longer on the receiving end. When somebody finally discovered the whereabouts of the big guy, he wasn't about to open the trunk from inside, even if he could, and nobody on the outside had a key. They had to call a locksmith to get him out."

"Was he armed?"

"As it turned out, no. But nobody was sure, until they got him out."

"Not a very comfortable spot for the locksmith to be in."

"I understand he picked it open with very long arms, and leaped out of the way in anticipation, a time or two, before he got it opened."

"I can't say I blame him. You know, it's funny what people will get themselves locked into. Somebody was telling about a woman who brought in a teenaged kid who had a handcuff around one ankle."

"Was that the one where the father had rigged up a makeshift ball-and-chain with a dog lead, a bowling ball, and the handcuffs, to keep the kid from going out with his buddies at night?" I asked.

"Right. Apparently, the father thought the kid's companions were up to no good, and he was determined to keep his son at home. The problem was, when he tried to release the boy, nobody could find the key."

"That isn't the only handcuff story I've heard lately. Someone was telling me about a friend of theirs, an older man, who was waiting at the front door of their shop early one morning, his hands secured behind his back in a pair of fur-lined cuffs."

"Oh, really?"

"The locksmith said, 'My word, Henry, how did you get yourself into a fix like this?' but Henry just blushed and grunted, 'Mind your own business and just get me loose.' The locksmith never did get an explanation, and to top it all, as soon as Henry was loose, he ran off down the street without even paying him."

Don was grinning, as he gazed off into the distance.

"What are you smiling about?"


"Oh, I was just thinking, that's one thing we've never taken in as collateral. Who knows? A pair of fur-lined handcuffs might bring a nifty price."

Dear readers,

I want to thank you for your overwhelming response to my book, Service With a Smile. As many of you know, we sold out of the copies on hand at ALOA in Chicago, back in July, and some of you who purchased your books there had to wait for copies to be shipped out to you. Thanks for your patience.

Since then, orders have continued to be received at The National Locksmith's office in record numbers. (An interesting side-note: non-locksmiths who have purchased my book tell me our problems and humorous situations are similar to those experienced in many other service-oriented businesses, and they enjoy reading about them, too.)

We have received some orders for ten or twelve books at a time from readers who plan to present Service With a Smile to their friends and associates as holiday gifts. If you have thoughts in this direction, let me urge you to get your order in as soon as possible, to avoid any last-minute delays. (You'll find ordering information elsewhere in this issue.)

Again, thanks for your interest and support. Keep Smiling! —Sara 

BEGINNER'S CORNER

Training Veteran Locksmiths

I learned about a locksmith shop that had trained many handicapped and disabled people and I thought it would be interesting to talk with the owner of this shop. I was not disappointed, because I found that this was one of the oldest locksmith shops in Phoenix.



by
Eugene Gentry

The large sign, Day's Key Shop, on North 7th Street, could be seen about one half a block away. Inside the store, I was greeted by Anna Day, who introduced me to her husband Jim. As I looked around the large interior of the shop, I saw two long work benches with different types of cutting machines. I was not familiar with some of them, but Jim described the machines to me.

Following is an interview with Jim and Anna Day:

The National Locksmith: "Could you tell me about your shop?"

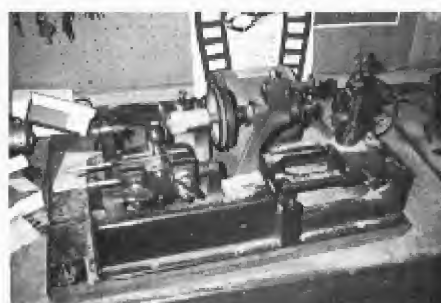
Jim: "We have been at this location about 26 years, but my father started the business in Phoenix in 1923. He had a bicycle shop and one day a man down on his luck came through town. He sold my dad a little hand crank key machine, a few blanks and a couple of code books for fifty dollars, then stayed for three days to teach him about locks and keys. He built up the business and opened up four shops in the state, one in Tucson and three in the valley. He sold the business, then had to repossess it. We kept this shop in Phoenix. In the early years there were only three locksmith shops in the valley, now I believe there are over 120."

The National Locksmith: "Are you a full service shop?"

Jim: "Yes, we have a truck and in the shop we do quite a bit of safe and vault work, hydraulic door closers, and in the past five years have been into card readers. We do a lot of commercial work."



1. Jim and Anna Day holding their plaque from the V.A.



2. One of the older cutting machines from Jim's shop.



3. One of the first automatic key cutters by Francis Keil & Sons (1920).

The National Locksmith: "Do you train people in your shop?"

Jim: "Yes, I have trained some people here. I trained about fourteen, twelve for the Veterans Administration and a couple for the State of Arizona. Most were handicapped or injured."

The National Locksmith: "Are you doing any training currently?"

Jim: "No, I haven't done any training for the last two years, however I did receive a beautiful plaque from the Disabled American Veterans at their last convention here. It was to honor small businesses who train veterans."

The National Locksmith: "Do you hear from the fellows that you trained?"

Jim: "Oh yes. I hear from them every so often. In fact there are four of them in town that are in competition with me. One of them works at a bank. I have a good relationship with all of them and they call me occasionally to ask questions. It's a good feeling to know that they are getting along well."

The National Locksmith: "Did you train anyone else other than through the government or state programs?"

Jim: "No, I really couldn't afford to pay them for not producing. You know it takes about three years before they start producing. I had to start at the beginning of the training. None had any locksmith schooling, but were screened for background and mechanical aptitude. The government paid one half the salary and I paid the other half. The Veterans Administration would also buy their tools."

Anna brought over the plaque that was kept hanging on the wall.

Anna: "We are very proud of this plaque." (See photograph 1.)

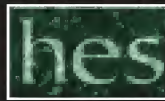
The National Locksmith: "Do you have any more stories about the people you trained?"

Jim: "One man, named Scotty, was a former policeman, who had his back broken. He was sponsored by the State of Arizona, and was with us about four years."

The National Locksmith: "Do you have any advice for new locksmiths?"

Jim: "Basically, get good mechanical training before you start out, such as reading a micrometer, or knowledge of physics. You have to be able to think mechanically. Even some of the new things that are coming out

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TECHNITIPS

Continued from page 15

screws has been stripped. I had a call to do a simple rekey on an office aluminum door, with an Adams Rite swing up bolt. When I removed the trim plate, on the edge of the door, I discovered that the bottom mounting screw had been stripped. The threads

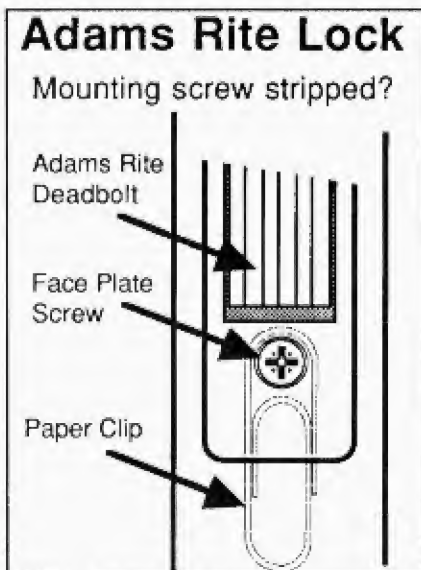


Illustration 9

in the aluminum door, behind the lock, would no longer hold the lock in the door. The bottom of the lock mechanism was being pushed out by the mounting spring.

By wedging a heavy bodied paper clip between the face of the Adams Rite lock and the edge of the door, as you see in illustration nine, the lock is prevented from pushing out of the door. When the trim plate is installed over the paper clip, the mounting screw will pass through the loop of the clip, and "sandwich" the clip between the trim plate and the face of the lock. The mounting spring and mounting screw are left in the lock, to provide outward tension on the lock assembly, preventing the lock from being pushed inward. The clip is inside the edge of the door, preventing the lock from protruding from the door. This is a very quick and practical method of repairing this type of failure. Bridges, mounting tabs screwed to the edge of the door, and various other methods exist, to solve this problem, but this Technitip has worked for me.

R. Lazich
Wisconsin




DETENTION LOCKS

Continued from page 62

in the detention field is ten fold from working in the public sector alone. It wouldn't hurt to check with your liability insurance carrier and tell them that you are going to be performing this type of service. One jailsmith I know told his carrier that he had been doing this type work for several months and his carrier promptly dropped coverage. Make sure you cover all your bases.


I have given you a very basic overview of some of the locks in the detention industry. Next we will be detailing individual locks and components of some of these locks.

Don't forget that I value your input, just send a note or fax to the magazine and tell us what you think about these articles, what you would like to know specifically about the detention field, or anything else on your mind. I promote an open exchange of information wherever possible. 

BEGINNER'S CORNER

Continued from page 87

have basic parts."

Jim and Anna showed me around the shop, and I saw cutting machines that I had never seen before. (See photographs 2 and 3.) One was a cutter with two wheels to cut a double-sided key without having to remove the key from the holder. Others were special cutters designed to cut just one type of key. One was a bit key cutter, and another was for tubular keys. 

RETAIL MERCHANDISING

Continued from page 59

found at the lowest price. Something much better can be bought for only a little more. You are the professional and your words will be received as good advice — and free advice at that! The purpose of a fighting brand is to clarify whether the buyer is fully aware of the price/product combinations you have.

If your counter product proposals are not as important, they will accept your fighting brand and will be satisfied that they got the price that they wanted. On the other hand, customers often will reawaken. They

Continued on next page

Continued from previous page

will tell you that they really need a good lock. They want the better choice. They will sell themselves. By letting them sell themselves you have allowed your customers to help justify the original price to themselves.

Locksmiths as Sales People

In addition to all these suggestions about merchandising, it is critical that locksmiths are a crucial part of the sales process. A customer should be given a list of benefits that help justify the price quote. For example, on a recent trip to one locksmith store, I asked about having three new door locks purchased and installed. The locksmith's response was, "Well, it will be \$25 just to make the service call and then \$25 for each lock installed." This is a negative sale: no one wants to get bad news up front.

Instead, the locksmith would have been better off if he had quoted me a flat \$100 fee for all installation and avoided reminding me he was going to charge \$25 just for showing up. He also could have offered me an installation guarantee. Or, he could have promised a free follow-up call within the first six months if there were any problems. Many firms miss the opportunity associated with a free follow-up call. A free follow-up call means an opportunity for follow-on business, whether it be with an existing customer directly — such as installation of bedroom and bathroom locks — or the potential to leave materials behind in order for your customer to refer you to other potential customers.

In summary, the service aspects of the locksmith's total product offering should be emphasized as a point of meaningful differentiation from the mega retailers such as Home Depot. To do so requires a bit of merchandising skill. This merchandising skill begins with learning how to present products, prices, and services properly and positively. It also involves the ability to create lock and service packages creatively to alleviate any worry the customer may have.

Future Mega Trend of Security

Regardless of whether you choose to compete with mega merchandisers or whether any significant part of your business is affected by them, a mega



trend into the next century will be the growing demand for security products and services for both the home and business. In the next management article we will talk in depth about this trend and discuss actions the locksmith industry must take to capitalize on this tremendous opportunity.



LETTERS

Continued from page 9

a fly by night company since when the sales girl came to my shop she had all the credentials of being a legitimate business, such as an endorsement from the Better Business Bureau and a history of being a very large and highly rated electronic industry corporation.

Quorum International is going to be having a booth at the ALOA convention this July and I would like to inform potential victims of the risk of dealing with Quorum.

Walter S. Biernat
Nevada

Editor's Note:

The "endorsement" from the Better Business Bureau (BBB) should have been your first clue. The BBB does not endorse companies; they simply register complaints. Sorry for your loss.



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